



Cisco ASR 5000 Series Statistics and Counters Reference

Versions 12.0 and 12.1

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Americas Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
<http://www.cisco.com>
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0883

Text Part Number: OL-25193-07

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Cisco ASR 5000 Series Statistics and Counters Reference

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CONTENTS

About this Guide	XV
Conventions Used.....	xvi
Contacting Customer Support.....	xviii
Additional Information.....	xix
Statistics and Counters Overview	21
Common Syntax Options	23
Schema Format String Syntax.....	23
AAL2 Schema Statistics	25
ALCAP Schema Statistics	29
APN Schema Statistics	57
ASNGW Schema Statistics	73
ASNPC Schema Statistics	173
BCMCS Schema Statistics	211
Card Schema Statistics	231
Closed R-P Schema Statistics	241
Context Schema Statistics	251
CS-Network-RANAP Schema Statistics	267
CS-Network-RTP Schema Statistics	285
CSCF Schema Statistics	289
CSCFINTF Schema Statistics	367
DCCA Schema Statistics	377
Diameter Accounting Schema Statistics	381
Diameter Authentication Schema Statistics	385
DLCI-Util Schema Statistics	389
DPCA Schema Statistics	393
ECS Schema Statistics	397
eGTP-C Service Schema	495
FA Schema Statistics	515
FNG Schema Statistics	523
GPRS Schema Statistics	527

GTP-C Schema Statistics	553
GTPP Schema Statistics.....	571
GTP-U Schema Statistics	579
HA Schema Statistics	583
HNBGW-HNBAP Schema Statistics	589
HNBGW-RANAP Schema Statistics	601
HNBGW-RTP Schema Statistics	627
HNBGW-RUA Schema Statistics.....	633
HNBGW-SCTP Schema Statistics	661
HSGW Schema Statistics	667
IMSA Schema Statistics	675
IP Pool Schema Statistics	685
IPSG Schema Statistics	687
LAC Schema Statistics	691
LMA Schema Statistics.....	701
LNS Schema Statistics	719
MAG Schema Statistics	725
MAP Schema Statistics	737
MIPv6HA Schema Statistics	743
MME Schema Statistics	751
MVS Schema Statistics.....	785
NAT Realm Schema Statistics	847
PCC-AF Schema Statistics	851
PCC-Policy Schema Statistics	853
PCC-Sp-Endpoint Schema Statistics	857
PCC Service Schema Statistics	861
PDG Schema Statistics.....	865
PDIF Schema Statistics	887
P-GW Node Level Schema Statistics	893
Port Schema Statistics	915
PPP Schema Statistics	919
PS-Network-RANAP Schema Statistics	927
RADIUS Schema Statistics	947
RP Schema Statistics	957

SCCP Schema Statistics	971
SGs Schema Statistics	981
SGSN Schema Statistics	987
SGTP Schema Statistics	1209
S-GW Node Level Schema Statistics	1223
SS7Link Schema Statistics	1243
SS7 Routing Domain Schema Statistics	1251
System Schema Statistics	1263
show aaa group name	1395
show active-charging	1403
show active-charging analyzer statistics name dns	1404
show active-charging analyzer statistics name h323	1406
show active-charging analyzer statistics name h323 verbose	1407
show active-charging analyzer statistics name icmpv6	1410
show active-charging analyzer statistics name ip verbose	1411
show active-charging analyzer statistics name ipv6	1413
show active-charging analyzer statistics name ipv6 verbose	1414
show active-charging analyzer statistics name p2p verbose	1416
show active-charging analyzer statistics name pptp	1440
show active-charging analyzer statistics name sip	1441
show active-charging analyzer statistics name tcp verbose	1443
show active-charging analyzer statistics name tftp	1446
show active-charging bandwidth-policy name	1447
show active-charging charging-action all	1449
show active-charging charging-action statistics name	1452
show active-charging content-filtering category policy-id all	1454
show active-charging content-filtering category statistics rulebase name	1455
show active-charging content-filtering category statistics	1457
show active-charging content-filtering server-group name	1460
show active-charging content-filtering server-group statistics verbose	1461
show active-charging credit-control session-states	1464
show active-charging credit-control statistics	1465
show active-charging edr-format all	1470
show active-charging edr-format statistics	1471
show active-charging edr-udr-file flow-control-counters	1472
show active-charging edr-udr-file statistics	1473
show active-charging firewall statistics	1475
show active-charging firewall statistics nat-realm	1476
show active-charging firewall statistics verbose	1477
show active-charging firewall statistics protocol icmp verbose	1482
show active-charging firewall statistics protocol icmpv6 verbose	1484
show active-charging firewall statistics protocol ip verbose	1486
show active-charging firewall statistics protocol ipv6 verbose	1487
show active-charging firewall statistics protocol udp verbose	1489
show active-charging firewall statistics callid <call_id> verbose	1490
show active-charging firewall statistics domainname <domain_name> verbose	1494
show active-charging firewall statistics username <user_name> verbose	1498
show active-charging firewall track-list attacking-servers	1502

show active-charging fw-and-nat policy name.....	1503
show active-charging flows full	1507
show active-charging flows full type p2p.....	1510
show active-charging flows type p2p	1511
show active-charging flow-mappings all	1513
show active-charging group-of-ruledefs name.....	1514
show active-charging nat statistics	1515
show active-charging p2p-dynamic-rules verbose.....	1517
show active-charging rulebase name.....	1518
show active-charging rulebase statistics.....	1524
show active-charging rulebase statistics name.....	1527
show active-charging ruledef firewall	1529
show active-charging ruledef statistics.....	1530
show active-charging ruledef statistics all firewall wide	1531
show active-charging ruledef statistics all charging.....	1532
show active-charging ruledef statistics all tpo.....	1533
show active-charging service all.....	1534
show active-charging sessions firewall required	1537
show active-charging sessions full	1538
show active-charging sessions full all	1545
show active-charging sessions summary.....	1552
show active-charging sessions summary type p2p.....	1561
show active-charging subsystem all	1568
show active-charging subsystem facility acsmgr instance	1573
show active-charging tcp-proxy statistics all verbose.....	1577
show active-charging tcp-proxy statistics socket-migration.....	1581
show active-charging timedef all	1582
show active-charging tpo profile statistics name	1583
show active-charging udr-format all.....	1586
show active-charging url-blacklisting statistics.....	1587
show active-charging url-blacklisting statistics rulebase name	1588
show active-charging video detailed-statistics	1589
show active-charging video detailed-statistics container mp4	1592
show active-charging video detailed-statistics rat cdma.....	1594
show active-charging video detailed-statistics ue laptop	1597
show administrators.....	1603
show administrators.....	1604
show administrators session id	1605
show alarm.....	1607
show alarm outstanding all verbose.....	1608
show alarm statistics.....	1609
show alcap	1611
show alcap counters	1612
show alcap-service all.....	1613
show alcap-service full	1615
show apn	1617
show apn all	1618
show apn counter ip-allocation all	1628
show apn statistics name.....	1629
show asngw-service.....	1635
show asngw-service all	1636

show asngw-service session all.....	1639
show asngw-service session counters.....	1640
show asngw-service session counters verbose.....	1643
show asngw-service session full.....	1648
show asngw-service session counters function-type data-path.....	1650
show asngw-service session peer-address.....	1653
show asngw-service session summary.....	1654
show asngw-service statistics.....	1655
show asngw-service statistics function-type ms-state-change.....	1658
show asngw-service statistics verbose.....	1661
show asnpc-service.....	1667
show asnpc-service all.....	1668
show asnpc-service session all.....	1670
show asnpc-service session full.....	1671
show asnpc-service session counters verbose.....	1673
show asnpc-service statistics verbose.....	1676
show bcmcs.....	1679
show bcmcs counters all.....	1680
show bcmcs statistics.....	1682
show bssap.....	1689
show bssap+ statistics.....	1690
show bulkstats data.....	1693
show cae-group server name.....	1695
show call-control-profile.....	1697
show call-control-profile full name.....	1698
show card.....	1707
show card diag.....	1708
show card hardware.....	1709
show card info.....	1710
show card mappings.....	1713
show card table.....	1714
show certificate.....	1715
show content-filtering.....	1717
show content-filtering category database.....	1718
show content-filtering category database all.....	1719
show content-filtering category database facility srdbmgr all.....	1720
show content-filtering category policy-id id.....	1721
show content-filtering category statistics.....	1722
show content-filtering category statistics facility srdbmgr all.....	1723
show content-filtering category url <url> policy-id <id> verbose.....	1724
show content-filtering server-group name.....	1725
show content-filtering server-group statistics.....	1726
show congestion-control.....	1729
show congestion-control statistics a11mgr instance.....	1730
show congestion-control statistics asngwmgr instance.....	1731
show context all.....	1733
show cpu table.....	1735

show crypto	1737
show crypto ikev2-ikesa security-associations summary	1738
show crypto ipsec security-associations	1739
show crypto ipsec security-associations statistics	1742
show crypto ipsec security-associations summary	1745
show crypto isakmp keys	1746
show crypto isakmp security-associations	1747
show crypto managers	1748
show crypto managers instance	1749
show crypto managers summary	1750
show crypto map summary	1751
show crypto statistics	1754
show crypto statistics ikev2 service-name	1761
show cs-network	1771
show cs-network all status	1772
show cscf	1775
show cscf nat media mapping all	1776
show cscf peer-servers full	1777
show cscf service li-packet-cable statistics	1778
show cscf service statistics name <service_name> all	1779
show cscf sessions counters	1797
show cscf sessions duration	1799
show cscf sip statistics	1801
show cscf tcp connections	1806
show dhcp	1809
show dhcp call-id	1810
show dhcp chaddr	1813
show dhcp dhcp-service	1814
show dhcp msid	1816
show dhcp full msid	1817
show dhcp status	1820
show dhcp-service	1821
show dhcp statistics	1823
show dhcp username	1829
show dhcp full username	1830
show diameter	1835
show diameter aaa-statistics	1836
show diameter authentication servers	1840
show diameter endpoints all	1841
show diameter message-queue counters outbound endpoint	1842
show diameter peers full all	1844
show diameter statistics	1845
show dns-client	1853
show dynamic-policy	1855
show dynamic-policy statistics	1856
show egtp	1859
show egtp peers interface	1860
show egtp sessions	1861
show egtp statistics	1863
show egtp statistics verbose	1879

3GPP Release 9, 29.274.....	1879
SRVCC Messages	1884
show egtp-service all.....	1892
show event-notif	1893
show fans	1895
show fa-service	1897
show ggsn-service	1901
show ggsn-service ggsn-table.....	1902
show ggsn-service all	1903
show gmb.....	1907
show gmb statistics	1908
show gmm-sm	1913
show gmm-sm statistics.....	1914
show gmm-sm statistics verbose.....	1933
show gprs-service	2075
show gprs-service all.....	2076
show gs-service	2079
show gs-service all.....	2080
show gtpc.....	2083
show gtpc counters ggsn-service.....	2084
show gtpc full.....	2087
show gtpc summary callid	2092
show gtpc statistics custom1.....	2094
show gtpc statistics custom2.....	2095
show gtpc statistics verbose	2096
show gtp.....	2113
show gtp accounting servers.....	2114
show gtp counters all	2115
show gtp group	2118
show gtp statistics	2123
show gtp statistics cgf-address.....	2128
show gtp storage-server statistics	2133
show gtp storage-server counters	2139
show gtp storage-server local file counters.....	2140
show gtp storage-server local file statistics.....	2141
show gtp storage-server status.....	2142
show gtp storage-server streaming file statistics.....	2144
show gtp storage-server streaming file statistics verbose.....	2145
show gtp storage-server streaming file counters all.....	2147
show gtpu-service	2149
show gtpu-service all.....	2150
show hardware card	2151
show hd-storage-policy	2153
show hd-storage-policy counters all	2154
show hd-storage-policy statistics all	2155
show hd raid verbose	2157

show hnbgw.....	2159
show hnbgw access-control-db.....	2160
show hnbgw access-control-db imsi	2161
show hnbgw counters	2162
show hnbgw counters hnbgw-service	2163
show hnbgw counters hnbid.....	2164
show hnbgw disconnect-reasons	2165
show hnbgw-service	2170
show hnbgw sessions all.....	2174
show hnbgw sessions full	2175
show hss-peer-service	2177
show hss-peer-service name <name>	2178
show hss-peer-service session full.....	2179
show hss-peer-service statistics all.....	2182
show ims-authorization	2185
show ims-authorization policy-control statistics.....	2186
show ims-authorization policy-gate status full.....	2190
show ims-authorization policy-gate counters all.....	2191
show ims-authorization servers.....	2192
show ims-authorization service name.....	2193
show ims-authorization sessions full all.....	2195
show ip	2199
show ip interface	2200
show ip interface gre-keepalive.....	2201
show ip pool address pool-name.....	2203
show ip pool summary.....	2204
show ip pool verbose	2205
show ipsg.....	2209
show ipsg service all.....	2210
show ipsg sessions counters all.....	2211
show ipsg statistics.....	2212
show ipv6.....	2215
show ipv6 interface summary	2216
show ipv6 neighbors	2217
show ipv6 route.....	2218
show l2tp	2219
show l2tp sessions	2220
show l2tp session full username	2221
show l2tp statistics lac-service.....	2223
show l2tp tunnels all	2227
show l2tp tunnels full lac-service.....	2228
show license info	2233
show linecard.....	2235
show linecard table.....	2236
show llc statistics.....	2237
show lma-service	2239
show lma-service statistics.....	2240

show local-user	2249
show local-user username name verbose	2250
show local-user statistics verbose	2251
show mag-service	2253
show mag-service statistics	2254
show mbms bearer-service	2261
show mbms bearer-service full all	2262
show mipfa	2265
show mipfa full username	2266
show mipfa peers fa-service	2268
show mipha	2269
show mipha statistics ha-service	2270
show mipha full username	2275
show mipha peers ha-service	2277
show mipv6ha	2279
show mipv6ha-service all	2280
show mipv6ha statistics	2281
show mme	2285
show mme-service all	2286
show mme-service db record all	2295
show mme-service db record imsi	2296
show mme-service db statistics	2298
show mme-service enodeb-association full	2299
show mme-service session all	2300
show mme-service session counters	2301
show mme-service session full	2304
show mme-service session summary	2308
show mme-service statistics	2309
show multicast-sessions	2329
show multicast-sessions all	2330
show multicast-sessions full all	2331
show ntp	2333
show ntp status	2334
show nw-reachability server all	2335
show operator-policy	2337
show operator-policy full name	2338
show orbem	2341
show orbem client id	2342
show orbem status	2343
show orbem session table	2345
show orbem session table	2346
show pcc-af	2347
show pcc-af service all	2348
show pcc-af service statistics	2349
show pcc-policy	2351
show pcc-policy service all	2352

show pcc-policy service statistics.....	2354
show pcc-policy session full all.....	2361
show pcc-service	2363
show pcc-service all.....	2364
show pcc-service session all.....	2366
show pcc-service session full	2367
show pcc-service statistics.....	2370
show pcc-sp-endpoint.....	2373
show pcc-sp-endpoint all.....	2374
show pdg-service	2375
show pdg-service all	2376
show pdg-service statistics	2379
show pdif-service	2383
show pdif-service statistics.....	2384
show pgw.....	2389
show pgw-service all.....	2390
show pgw-service statistics all.....	2392
show port.....	2399
show port datalink counters.....	2400
show port info	2402
show port npu counters	2410
show port table	2412
show port utilization table.....	2413
show ppp	2415
show ppp.....	2416
show ppp full username.....	2417
show ppp statistics pdsn-service.....	2420
show ps-network.....	2425
show ps-network all status.....	2426
show prepaid	2427
show prepaid 3gpp2 statistics.....	2428
show prepaid wimax statistics asngw-service.....	2429
show radius	2431
show radius client status.....	2432
show radius counters all	2433
show radius servers	2441
show resources.....	2443
show resources cpu.....	2444
show resources session	2445
show rohc statistics	2447
show rp	2451
show rp.....	2452
show rp full username.....	2455
show rp statistics pdsn-service	2460
show session	2469
show session counters historical all.....	2470

show session disconnect-reasons	2471
show session disconnect-reasons verbose	2472
show session progress	2495
show session recovery status verbose	2498
show session subsystem facility a11mgr all.....	2499
show session subsystem facility aaamgr all.....	2500
show session subsystem facility aaaproxy all	2507
show session subsystem facility asngwmgr all.....	2508
show session subsystem facility asnpcmgr all	2509
show session subsystem facility famgr all	2510
show session subsystem facility gtpcmgr all.....	2511
show session subsystem facility hamgr all	2512
show session subsystem facility mmedemux.....	2513
show session subsystem facility mmemgr all.....	2514
show session subsystem facility sessmgr all	2518
show session trace statistics.....	2524
show session trace subscriber	2525
show sgs-service.....	2527
show sgs-service statistics all	2528
show sgs-service vir-status full.....	2531
show sgsn-service.....	2533
show sgsn-service all	2534
show sgtp.....	2537
show sgtp-service ggsn-table.....	2538
show sgtp-service sgsn-table.....	2539
show sgtpu.....	2541
show sgtpu statistics	2542
show sgw	2547
show sgw-service all	2548
show sgw-service statistics all verbose.....	2550
show sms statistics	2561
show sms statistics gprs only verbose.....	2562
show sms statistics name.....	2572
show sms statistics sgsn only verbose	2577
show sms statistics verbose	2586
show sndcp statistics verbose	2595
show snmp.....	2599
show snmp accesses	2600
show snmp notifies.....	2601
show snmp trap history.....	2602
show snmp trap statistics	2603
show srp.....	2605
show srp checkpoint statistics.....	2606
show srp info.....	2611
show srp monitor	2612
show srp statistics.....	2613
show ss7-routing-domain	2615
show ss7-routing-domain.....	2616

show subscribers	2617
show subscribers aaa-configuration	2618
show subscribers access-flows	2620
show subscribers access-flows full	2622
show subscribers access-flows wf1	2624
show subscribers all	2626
show subscribers asngw-only all	2630
show subscribers asngw-service	2633
show subscribers counters username	2636
show subscribers cscf-only full	2639
show subscribers enodeb-address	2645
show subscribers firewall required	2648
show subscribers full	2651
show subscribers full username	2658
show subscribers ggsn-only	2666
show subscribers ggsn-only all	2669
show subscribers ggsn-only full	2671
show subscribers gprs-only full	2679
show subscribers hnbgw-only all	2691
show subscribers hnbgw-only full	2692
show subscribers mme-only full	2698
show subscribers pdif-service	2700
show subscribers policy	2702
show subscribers sgsn-only full	2704
show subscribers sgsn-only partial qos negotiated	2712
show subscribers summary	2713
show subscribers tft	2717
show subscribers wf1 all	2718
show tacacs	2723
show tacacs	2724
show tacacs client statistics	2726
show tacacs session statistics	2727
show task	2729
show task info	2730
show task resources card	2731
show task resources facility	2732
show task resources max	2733
show task table	2734
show temperature	2735
show threshold	2737
show url-blacklisting	2739
show url-blacklisting database all	2740
show url-blacklisting database facility acsmgr instance	2741
show url-blacklisting url	2742

About this Guide

This document pertains to the features and functionality that run on and/or that are related to the Cisco® ASR 5000 Chassis.

This preface includes the following sections:

- [Conventions Used](#)
- [Contacting Customer Support](#)
- [Additional Information](#)

Conventions Used

The following tables describe the conventions used throughout this documentation.

Icon	Notice Type	Description
	Information Note	Provides information about important features or instructions.
	Caution	Alerts you of potential damage to a program, device, or system.
	Warning	Alerts you of potential personal injury or fatality. May also alert you of potential electrical hazards.
	Electrostatic Discharge (ESD)	Warns you to take proper grounding precautions before handling ESD sensitive components or devices.

Typeface Conventions	Description
Text represented as a screen display	This typeface represents text that appears on your terminal screen, for example: Login:
Text represented as commands	This typeface represents commands that you enter at the CLI, for example: show ip access-list This document always gives the full form of a command in lowercase letters. Commands are <u>not</u> case sensitive.
Text represented as a command variable	This typeface represents a variable that is part of a command, for example: show card slot_number <i>slot_number</i> is a variable representing the desired chassis slot number.
Text represented as menu or sub-menu names	This typeface represents menus and sub-menus that you access within a software application, for example: Click the File menu, then click New .

Command Syntax Conventions	Description
{ keyword or <i>variable</i> }	Required keywords and variables are surrounded by braces. They must be entered as part of the command syntax.
[keyword or <i>variable</i>]	Optional keywords or variables that may or may not be used are surrounded by brackets.

Command Syntax Conventions	Description
	Some commands support alternative variables. These “options” are documented within braces or brackets by separating each variable with a vertical bar. These variables can be used in conjunction with required or optional keywords or variables. For example: <pre>{ nonce timestamp }</pre> OR <pre>[count <i>number_of_packets</i> size <i>number_of_bytes</i>]</pre>

Contacting Customer Support

Go to <http://www.cisco.com/cisco/web/support/> to submit a service request. A valid Cisco account (username and password) is required to access this site. Please contact your Cisco account representative for additional information.

Additional Information

Refer to the following guides for supplemental information about the system:

- *Cisco ASR 5000 Installation Guide*
- *Cisco ASR 5000 System Administration Guide*
- *Cisco ASR 5x00 CDMA Command Line Interface Reference*
- *Cisco ASR 5x00 eHRPD/LTE Command Line Interface Reference*
- *Cisco ASR 5x00 GPRS/UMTS Command Line Interface Reference*
- *Cisco ASR 5x00 Thresholding Configuration Guide*
- *Cisco ASR 5x00 SNMP MIB Reference*
- *Web Element Manager Installation and Administration Guide*
- *Cisco ASR 5x00 AAA Interface Administration and Reference*
- *Cisco ASR 5x00 GTPP Interface Administration and Reference*
- *Cisco ASR 5x00 Release Change Reference*
- *Cisco ASR 5x00 Statistics and Counters Reference*
- *Cisco ASR 5x00 Gateway GPRS Support Node Administration Guide*
- *Cisco ASR 5x00 HRPD Serving Gateway Administration Guide*
- *Cisco ASR 5000 IP Services Gateway Administration Guide*
- *Cisco ASR 5x00 Mobility Management Entity Administration Guide*
- *Cisco ASR 5x00 Packet Data Network Gateway Administration Guide*
- *Cisco ASR 5x00 Packet Data Serving Node Administration Guide*
- *Cisco ASR 5x00 System Architecture Evolution Gateway Administration Guide*
- *Cisco ASR 5x00 Serving GPRS Support Node Administration Guide*
- *Cisco ASR 5x00 Serving Gateway Administration Guide*
- *Cisco ASR 5000 Session Control Manager Administration Guide*
- *Cisco ASR 5000 Packet Data Gateway/Tunnel Termination Gateway Administration Guide*
- Release notes that accompany updates and upgrades to the StarOS for your service and platform

Chapter 1

Statistics and Counters Overview

This document organizes and provides descriptive information for the various non-MIB forms of statistics, often called counters, generated by the ASR 5000. For this document, these statistics are divided into two categories: bulk statistics and statistics output by CLI **show** commands.

Bulk statistics are typically collected within configured time frames and then the data is put into files or moved to remote systems where the data is processed. The bulk statistic variables are organized by shared concepts (such as service or interface) into schema; for example, the system schema includes all the statistics collected for the system. The schema chapters in this document contain the bulk statistic variables for each schema.

The output statistics usually provide a greater degree of granularity than the bulk statistics because:

- the dynamic content is captured at the time the CLI command is entered,
- the output statistic represents a single element, where the bulk statistic value is often a combination of values for multiple elements,
- the statistical display can be finetuned based on the keywords included in the **show** command when it is entered.

The output statistics are organized by the CLI **show** command that generates their display; for example, **show power all cards** displays the current power status for each card in every slot of the chassis. Some of the **show** command outputs do not present statistics but display configuration information for reference purposes; for example, **show gs-service full name <service_name>** will display the configuration for the named Gs service.

 **Important:** The variables listed below are common to (used by) all bulk statistic schema.

Table 1. Common Bulk Statistic Variables

Variables	Description	Data Type
uptime	The total uptime (in seconds) of the system that created the file. Type: Counter	Int32
host	The system hostname that created the file Type: Information	String
ipaddr	The default management (local context) IP address in dotted decimal format. An empty string is inserted if no address is available. Type: Information	String
date	The UTC date that the collection file was created in YYYYMMDD format where YYYY represents the year, MM represents the month and DD represents the day. Type: Information	String
date3	The UTC date that the collection file was created in YYMMDD format where YY represents the year, MM represents the month and DD represents the day. Type: Information	String

Variables	Description	Data Type
time	The UTC time that the collection file was created in HHMMSS format where HH represents the hours, MM represents the minutes, and SS represents the seconds. Type: Information	String
time2	The UTC time that the collection file was created in HH:MM:SS format where HH represents the hours, MM represents the minutes, and SS represents the seconds. Type: Information	String
time3	The UTC time that the collection file was created in HH:MM format where HH represents the hours, MM represents the minutes. Type: Information	String
epochtime	The number of seconds since Jan 1, 1970, 00:00:00 GMT. Type: Counter	Int32
schemas	Provides all the schemas. Type: Information	String
schema-delta	Provides schemas if they have changed since last output. Type: Information	String
localdate	The date (adjusted for the local timezone) that the collection file was created in YYYYMMDD format where YYYY represents the year, MM represents the month and DD represents the day. Type: Information	String
localdate3	The date that the collection file was created in YYYYMMDD format where YYYY represents the year, MM represents the month and DD represents the day. The date displays in local time, not UTC. Type: Information	String
localtime	The time (adjusted for the local timezone) that the collection file was created in HHMMSS format where HH represents the hours, MM represents the minutes, and SS represents the seconds. Type: Information	String
localtime2	The time (adjusted for the local timezone) that the collection file was created in HH:MM:SS format where HH represents the hours, MM represents the minutes, and SS represents the seconds. Type: Information	String
localtime3	The time that the collection file was created in HH:MM:SS format where HH represents the hours, MM represents the minutes, and SS represents the seconds. The time displays in local time, not UTC. Type: Information	String
localtz	The name of the local time zone. Type: Information	String
localtzooffset	The local offset from GMT in the form "-0400" Type: Information	String
swbuild	The software build number of the operating system. Type: Information	String

Common Syntax Options

The following defines common syntax block options. These options appear in similar commands and are detailed here for easy reference.

Schema Format String Syntax

The schema format string is used to define the structure of generated bulk statistics data. The string may contain static text, dynamic content, and bulk statistic variables, or any combination.

Static text includes any ASCII characters which are of a fixed value. Static text may also include control characters by using escaped character sequences.

Escaped character short cuts are supported such as ‘\n’ for new line and ‘\t’ for tab.

Variables within the format string must be enclosed in double ampersands, e.g., “%var%”. The actual variables supported are command-dependent and are described with each command.

Chapter 2

AAL2 Schema Statistics

The AAL2 schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 2. Bulk Statistic Variables in the AAL2 Schema

Variables	Description	Data Type
vpnname	The name of the context in which AAL2 service is configured. This is a key variable.	String
vpnid	The identity number of the context in which AAL2 service is configured. This is a key variable.	String

Variables	Description	Data Type
servname	The name of the AAL2 service for which statistics are collected or displayed. This is a key variable.	String
uplink-pkts-tx	Indicates the total number of AAL2 Uplink Packets transmitted. Trigger: When AAL2 Uplink Packets are transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
uplink-byts-tx	Indicates the total number of AAL2 Uplink Bytes transmitted. Trigger: When AAL2 Uplink Bytes are transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
downlink-pkts-rx	Indicates the total number of AAL2 Downlink Packets received. Trigger: When AAL2 Downlink Packets are received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
downlink-byts-rx	Indicates the total number of AAL2 Downlink Bytes received. Trigger: When AAL2 Downlink Bytes are received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
downlink-pkts-dropped	Indicates the total number of AAL2 Downlink packets dropped. Trigger: When AAL2 Downlink packets are dropped by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
downlink-pkts-drop-rab-not-in-conn-state	Indicates the total number of AAL2 Downlink Packets dropped with cause RAB not in CONNETED state. Trigger: When AAL2 Downlink Packets are dropped by ALCAP Service with cause RAB not in CONNETED state. Availability: Across all ALCAP Services.	Unsigned Int32
downlink-pkts-drop-cause-misc	Indicates the total number of AAL2 Downlink Packets dropped with cause Miscellaneous. Trigger: When AAL2 Downlink Packets are dropped by ALCAP Service with cause Miscellaneous. Availability: Across all ALCAP Services.	Unsigned Int32
downlink-byts-dropped	Indicates the total number of AAL2 Downlink bytes dropped. Trigger: When AAL2 Downlink bytes are dropped by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
downlink-byts-drop-rab-not-in-conn-state	Indicates the total number of AAL2 Downlink bytes dropped with cause RAB not in CONNETED state. Trigger: When AAL2 Downlink bytes are dropped by ALCAP Service with cause RAB not in CONNETED state. Availability: Across all ALCAP Services.	Unsigned Int32
downlink-byts-drop-cause-misc	Indicates the total number of AAL2 Downlink bytes dropped with cause Miscellaneous. Trigger: When AAL2 Downlink Bytes are dropped by ALCAP Service with cause Miscellaneous. Availability: Across all ALCAP Services.	Unsigned Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 3

ALCAP Schema Statistics

The ALCAP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 3. Bulk Statistic Variables in the ALCAP Schema

Variables	Description	Data Type
vpnname	The name of the context in which the ALCAP service is configured. This is a key variable.	String
vpnid	The identity number of the context in which ALCAP service is configured. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
servname	The name of the ALCAP service for which statistics are collected or displayed. This is a key variable.	String
num-aal2-channels-in-idle-state	Indicates the total number of AAL2 channels in IDLE state. Trigger: When AAL2 channel goes to IDLE state. Availability: Across all ALCAP Services. Type: Gauge	Unsigned Int32
num-aal2-channels-in-connected-state	Indicates the total number of AAL2 channels in CONNECTED state. Trigger: When AAL2 channel goes to CONNECTED state. Availability: Across all ALCAP Services. Type: Gauge	Unsigned Int32
num-aal2-channels-in-connecting	Indicates the total number of AAL2 channels in CONNECTING state. Trigger: When AAL2 channel goes to CONNECTING state. Availability: Across all ALCAP Services. Type: Gauge	Unsigned Int32
num-aal2-channels-in-rel-pending-state	Indicates the total number of AAL2 channels in RELEASE PENDING state. Trigger: When AAL2 channel goes to RELEASE PENDING state. Availability: Across all ALCAP Services. Type: Gauge	Unsigned Int32
num-aal2-channels-in-reset-pending-state	Indicates the total number of AAL2 channels in RESET PENDING state. Trigger: When AAL2 channel goes to RESET PENDING state. Availability: Across all ALCAP Services. Type: Gauge	Unsigned Int32
num-aal2-paths-in-locally-blocked-state	Indicates the total number of AAL2 Paths in LOCALLY BLOCKED state. Trigger: When AAL2 Path goes to LOCALLY BLOCKED state. Availability: Across all ALCAP Services. Type: Gauge	Unsigned Int32
num-aal2-paths-in-remote-blocked-state	Indicates the total number of AAL2 Paths in REMOTE BLOCKED state. Trigger: When AAL2 Path goes to REMOTE BLOCKED state. Availability: Across all ALCAP Services. Type: Gauge	Unsigned Int32
num-aal2-paths-in-blocked-state	Indicates the total number of AAL2 Paths in BLOCKED (REMOTE + LOCAL) state. Trigger: When AAL2 Path goes to BLOCKED (REMOTE + LOCAL) state. Availability: Across all ALCAP Services. Type: Gauge	Unsigned Int32
num-aal2-paths-in-reset-pending-state	Indicates the total number of AAL2 Paths in RESET PENDING state. Trigger: When AAL2 Path goes to RESET PENDING state. Availability: Across all ALCAP Services. Type: Gauge	Unsigned Int32
est-req-tx	Indicates the total number of Establish Request message transmitted. Trigger: When Establish Request is transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
est-confirm-rx	Indicates the total number of Establish Confirm message received. Trigger: When Establish Confirm message is received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
est-confirm-rx-drop-no-conn-to-handle	Indicates the total number of Establish Confirm message received for Dropped/No Connection To Handle. Trigger: When Establish Confirm message is received by ALCAP Service for Dropped/No Connection To Handle. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx	Indicates the total number of Release Request message transmitted. Trigger: When Release Request is transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-unallocated-no-tx	Indicates the total number of Release Request message transmitted for Unallocated (unassigned) number. Trigger: When Release Request is Transmitted by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-no-route-to-dest-tx	Indicates the total number of Release Request message transmitted for No route to destination. Trigger: When Release Request is Transmitted by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-normal-unspecified-tx	Indicates the total number of Release Request message transmitted for Normal/unspecified. Trigger: When Release Request is Transmitted by ALCAP Service for Normal/unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-no-cir-channel-avail-tx	Indicates the total number of Release Request message transmitted for No circuit/channel available. Trigger: When Release Request is Transmitted by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-nw-out-of-order-tx	Indicates the total number of Release Request message transmitted for Network out of order. Trigger: When Release Request is Transmitted by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-temp-failure-tx	Indicates the total number of Release Request message transmitted for Temporary failure. Trigger: When Release Request is Transmitted by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-switching-equip-congestion-tx	Indicates the total number of Release Request message transmitted for Switching equipment congestion. Trigger: When Release Request is Transmitted by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
rel-req-tx-req-cir-channel-not-avail-tx	Indicates the total number of Release Request message transmitted for Requested circuit/channel not available. Trigger: When Release Request is Transmitted by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-res-unavail-unspecified-tx	Indicates the total number of Release Request message transmitted for Resource unavailable/unspecified. Trigger: When Release Request is Transmitted by ALCAP Service for Resource unavailable/unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-aal-param-cant-be-supported-tx	Indicates the total number of Release Request message transmitted for AAL parameters cannot be supported. Trigger: When Release Request is Transmitted by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-inv-msg-unspecified-tx	Indicates the total number of Release Request message transmitted for Invalid message/unspecified. Trigger: When Release Request is Transmitted by ALCAP Service for Invalid message/unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-mandatory-ie-missing-tx	Indicates the total number of Release Request message transmitted for Mandatory information element is missing. Trigger: When Release Request is Transmitted by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-msg-type-non-exist-not-impl-tx	Indicates the total number of Release Request message transmitted for Message type non-existent or not implemented. Trigger: When Release Request is Transmitted by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-ie-param-non-exist-not-impl-tx	Indicates the total number of Release Request message transmitted for Information element/parameter non-existent or not implemented. Trigger: When Release Request is Transmitted by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-invalid-ie-contents-tx	Indicates the total number of Release Request message transmitted for Invalid information element contents. Trigger: When Release Request is Transmitted by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-tx-recovery-on-timer-exp-tx	Indicates the total number of Release Request message transmitted for Recovery on timer expiry. Trigger: When Release Request is Transmitted by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
rel-req-tx-msg-unrec-param-discard-tx	Indicates the total number of Release Request message transmitted for Message with unrecognized parameter/discarded. Trigger: When Release Request is Transmitted by ALCAP Service for Message with unrecognized parameter/discarded. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx	Indicates the total number of Release Request message received. Trigger: When Release Request is Received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-unallocated-no-rx	Indicates the total number of Release Request message received for Unallocated (unassigned) number. Trigger: When Release Request is Received by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-no-route-to-dest-rx	Indicates the total number of Release Request message received for No route to destination. Trigger: When Release Request is Received by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-normal-unspecified-rx	Indicates the total number of Release Request message received for Normal, unspecified. Trigger: When Release Request is Received by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-no-cir-channel-avail-rx	Indicates the total number of Release Request message received for No circuit/channel available. Trigger: When Release Request is Received by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-nw-out-of-order-rx	Indicates the total number of Release Request message received for Network out of order. Trigger: When Release Request is Received by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-temp-failure-rx	Indicates the total number of Release Request message received for Temporary failure. Trigger: When Release Request is Received by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-switching-equip-congestion-rx	Indicates the total number of Release Request message received for Switching equipment congestion. Trigger: When Release Request is Received by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rel-req-rx-req-cir-channel-not-avail-rx	Indicates the total number of Release Request message received for Requested circuit/channel not available. Trigger: When Release Request is Received by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-res-unavail-unspecified-rx	Indicates the total number of Release Request message received for Resource unavailable, unspecified. Trigger: When Release Request is Received by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-aal-param-cant-be-supported-rx	Indicates the total number of Release Request message received for AAL parameters cannot be supported. Trigger: When Release Request is Received by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-inv-msg-unspecified-rx	Indicates the total number of Release Request message received for Invalid message, unspecified. Trigger: When Release Request is Received by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-mandatory-ie-missing-rx	Indicates the total number of Release Request message received for Mandatory information element is missing. Trigger: When Release Request is Received by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-msg-type-non-exist-not-impl-rx	Indicates the total number of Release Request message received for Message type non-existent or not implemented. Trigger: When Release Request is Received by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-ie-param-non-exist-not-impl-rx	Indicates the total number of Release Request message received for Information element/parameter non-existent or not implemented. Trigger: When Release Request is Received by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-invalid-ie-contents-rx	Indicates the total number of Release Request message received for Invalid information element contents. Trigger: When Release Request is Received by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
rel-req-rx-recovery-on-timer-exp-rx	Indicates the total number of Release Request message received for Recovery on timer expiry. Trigger: When Release Request is Received by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
rel-req-rx-msg-unrec-param-discard-rx	Indicates the total number of Release Request message received for Message with unrecognized parameter, discarded. Trigger: When Release Request is Received by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx	Indicates the total number of Release Confirm message transmitted. Trigger: When Release Confirm message is transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-unallocated-no-tx	Indicates the total number of Release Confirm message received for Unallocated (unassigned) number. Trigger: When Release confirm is Transmitted by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-no-route-to-dest-tx	Indicates the total number of Release Confirm message received for No route to destination. Trigger: When Release confirm is Transmitted by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-normal-unspecified-tx	Indicates the total number of Release Confirm message received for Normal, unspecified. Trigger: When Release confirm is Transmitted by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-no-cir-channel-avail-tx	Indicates the total number of Release Confirm message received for No circuit/channel available. Trigger: When Release confirm is Transmitted by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-nw-out-of-order-tx	Indicates the total number of Release Confirm message received for Network out of order. Trigger: When Release confirm is Transmitted by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-temp-failure-tx	Indicates the total number of Release Confirm message received for Temporary failure. Trigger: When Release confirm is Transmitted by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-switching-equip-congestion-tx	Indicates the total number of Release Confirm message received for Switching equipment congestion. Trigger: When Release confirm is Transmitted by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
rel-confirm-tx-req-cir-channel-not-avail-tx	Indicates the total number of Release Confirm message received for Requested circuit/channel not available. Trigger: When Release confirm is Transmitted by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-res-unavail-unspecified-tx	Indicates the total number of Release Confirm message received for Resource unavailable, unspecified. Trigger: When Release confirm is Transmitted by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-aal-param-cant-be-supported-tx	Indicates the total number of Release Confirm message received for AAL parameters cannot be supported. Trigger: When Release confirm is Transmitted by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-inv-msg-unspecified-tx	Indicates the total number of Release Confirm message received for Invalid message, unspecified. Trigger: When Release confirm is Transmitted by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-mandatory-ie-missing-tx	Indicates the total number of Release Confirm message received for Mandatory information element is missing. Trigger: When Release confirm is Transmitted by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-msg-type-non-exist-not-impl-tx	Indicates the total number of Release Confirm message received for Message type non-existent or not implemented. Trigger: When Release confirm is Transmitted by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-ie-param-non-exist-not-impl-tx	Indicates the total number of Release Confirm message received for Information element/parameter non-existent or not implemented. Trigger: When Release confirm is Transmitted by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-invalid-ie-contents-tx	Indicates the total number of Release Confirm message received for Invalid information element contents. Trigger: When Release confirm is Transmitted by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-tx-recovery-on-timer-exp-tx	Indicates the total number of Release Confirm message received for Recovery on timer expiry. Trigger: When Release confirm is Transmitted by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
rel-confirm-tx-msg-unrec-param-discard-tx	Indicates the total number of Release Confirm message received for Message with unrecognized parameter, discarded. Trigger: When Release confirm is Transmitted by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx	Indicates the total number of Release Confirm message received. Trigger: When Release Confirm message is received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-unallocated-no-rx	Indicates the total number of Release confirm Received for Unallocated (unassigned) number. Trigger: When Release Confirm message is received by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-no-route-to-dest-rx	Indicates the total number of Release confirm Received for No route to destination. Trigger: When Release Confirm message is received by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-normal-unspecified-rx	Indicates the total number of Release confirm Received for Normal, unspecified. Trigger: When Release Confirm message is received by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-no-cir-channel-avail-rx	Indicates the total number of Release confirm Received for No circuit/channel available. Trigger: When Release Confirm message is received by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-nw-out-of-order-rx	Indicates the total number of Release confirm Received for Network out of order. Trigger: When Release Confirm message is received by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-temp-failure-rx	Indicates the total number of Release confirm Received for Temporary failure. Trigger: When Release Confirm message is received by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-switching-equip-congestion-rx	Indicates the total number of Release confirm Received for Switching equipment congestion. Trigger: When Release Confirm message is received by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-req-cir-channel-not-avail-rx	Indicates the total number of Release confirm Received for Requested circuit/channel not available. Trigger: When Release Confirm message is received by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
rel-confirm-rx-res-unavail- unspecified-rx	Indicates the total number of Release confirm Received for Resource unavailable, unspecified. Trigger: When Release Confirm message is received by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-aal-param- cant-be-supported-rx	Indicates the total number of Release confirm Received for AAL parameters cannot be supported. Trigger: When Release Confirm message is received by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-inv-msg- unspecified-rx	Indicates the total number of Release confirm Received for Invalid message, unspecified. Trigger: When Release Confirm message is received by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-mandatory-ie- missing-rx	Indicates the total number of Release confirm Received for Mandatory information element is missing. Trigger: When Release Confirm message is received by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-msg-type- non-exist-not-impl-rx	Indicates the total number of Release confirm Received for Message type non-existent or not implemented. Trigger: When Release Confirm message is received by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-ie-param- non-exist-not-impl-rx	Indicates the total number of Release confirm Received for Information element/parameter non-existent or not implemented. Trigger: When Release Confirm message is received by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-invalid-ie- contents-rx	Indicates the total number of Release confirm Received for Invalid information element contents. Trigger: When Release Confirm message is received by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-recovery-on- timer-exp-rx	Indicates the total number of Release confirm Received for Recovery on timer expiry. Trigger: When Release Confirm message is received by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32
rel-confirm-rx-msg-unrec- param-discard-rx	Indicates the total number of Release confirm Received for Message with unrecognized parameter, discarded. Trigger: When Release Confirm message is received by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
modify-req-tx	Indicates the total number of Modify Request message transmitted. Trigger: When Modify Request is Transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
modify-req-rx	Indicates the total number of Modify Request message received. Trigger: When Modify Request is Received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
modify-ack-tx	Indicates the total number of Modify Acknowledge Transmitted. Trigger: When Modify Acknowledge is Transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
modify-ack-rx	Indicates the total number of Modify Acknowledge message received. Trigger: When Modify Acknowledge is Received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
modify-rej-tx	Indicates the total number of Modify Reject Transmitted. Trigger: When Modify Reject is Transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
modify-rej-rx	Indicates the total number of Modify Reject message received. Trigger: When Modify Reject is Received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
blo-req-tx	Indicates the total number of Block Request message transmitted. Trigger: When Block Request is Transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
blo-req-rx	Indicates the total number of Block Request message received for. Trigger: When Block Request is Received by ALCAP Service for. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx	Indicates the total number of Block Confirm message received. Trigger: When Block confirm is Transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-unallocated-no-tx	Indicates the total number of Block Confirm message received for Unallocated (unassigned) number. Trigger: When Block confirm is Transmitted by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-no-route-to-dest-tx	Indicates the total number of Block Confirm message received for No route to destination. Trigger: When Block confirm is Transmitted by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-normal-unspecified-tx	Indicates the total number of Block Confirm message received for Normal, unspecified. Trigger: When Block confirm is Transmitted by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
blo-cfm-tx-no-cir-channel-avail-tx	Indicates the total number of Block Confirm message received for No circuit/channel available. Trigger: When Block confirm is Transmitted by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-nw-out-of-order-tx	Indicates the total number of Block Confirm message received for Network out of order. Trigger: When Block confirm is Transmitted by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-temp-failure-tx	Indicates the total number of Block Confirm message received for Temporary failure. Trigger: When Block confirm is Transmitted by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-switching-equip-congestion-tx	Indicates the total number of Block Confirm message received for Switching equipment congestion. Trigger: When Block confirm is Transmitted by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-req-cir-channel-not-avail-tx	Indicates the total number of Block Confirm message received for Requested circuit/channel not available. Trigger: When Block confirm is Transmitted by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-res-unavail-unspecified-tx	Indicates the total number of Block Confirm message received for Resource unavailable, unspecified. Trigger: When Block confirm is Transmitted by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-aal-param-cant-be-supported-tx	Indicates the total number of Block Confirm message received for AAL parameters cannot be supported. Trigger: When Block confirm is Transmitted by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-inv-msg-unspecified-tx	Indicates the total number of Block Confirm message received for Invalid message, unspecified. Trigger: When Block confirm is Transmitted by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-mandatory-ie-missing-tx	Indicates the total number of Block Confirm message received for Mandatory information element is missing. Trigger: When Block confirm is Transmitted by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
blo-cfm-tx-msg-type-non-exist-not-impl-tx	Indicates the total number of Block Confirm message received for Message type non-existent or not implemented. Trigger: When Block confirm is Transmitted by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-ie-param-non-exist-not-impl-tx	Indicates the total number of Block Confirm message received for Information element/parameter non-existent or not implemented. Trigger: When Block confirm is Transmitted by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-invalid-ie-contents-tx	Indicates the total number of Block Confirm message received for Invalid information element contents. Trigger: When Block confirm is Transmitted by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-recovery-on-timer-exp-tx	Indicates the total number of Block Confirm message received for Recovery on timer expiry. Trigger: When Block confirm is Transmitted by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-tx-msg-unrec-param-discard-tx	Indicates the total number of Block Confirm message received for Message with unrecognized parameter, discarded. Trigger: When Block confirm is Transmitted by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx	Indicates the total number of Block confirm message received. Trigger: When Block Confirm message is received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-unallocated-no-rx	Indicates the total number of Block Confirm message received for Unallocated (unassigned) number. Trigger: When Block Confirm message is received by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-no-route-to-dest-rx	Indicates the total number of Block Confirm message received for No route to destination. Trigger: When Block Confirm message is received by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-normal-unspecified-rx	Indicates the total number of Block Confirm message received for Normal, unspecified. Trigger: When Block Confirm message is received by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
blo-cfm-rx-no-cir-channel-avail-rx	Indicates the total number of Block Confirm message received for No circuit/channel available. Trigger: When Block Confirm message is received by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-nw-out-of-order-rx	Indicates the total number of Block Confirm message received for Network out of order. Trigger: When Block Confirm message is received by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-temp-failure-rx	Indicates the total number of Block Confirm message received for Temporary failure. Trigger: When Block Confirm message is received by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-switching-equip-congestion-rx	Indicates the total number of Block Confirm message received for Switching equipment congestion. Trigger: When Block Confirm message is received by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-req-cir-channel-not-avail-rx	Indicates the total number of Block Confirm message received for Requested circuit/channel not available. Trigger: When Block Confirm message is received by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-res-unavail-unspecified-rx	Indicates the total number of Block Confirm message received for Resource unavailable, unspecified. Trigger: When Block Confirm message is received by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-aal-param-cant-be-supported-rx	Indicates the total number of Block Confirm message received for AAL parameters cannot be supported. Trigger: When Block Confirm message is received by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-inv-msg-unspecified-rx	Indicates the total number of Block Confirm message received for Invalid message, unspecified. Trigger: When Block Confirm message is received by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-mandatory-ie-missing-rx	Indicates the total number of Block Confirm message received for Mandatory information element is missing. Trigger: When Block Confirm message is received by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
blo-cfm-rx-msg-type-non-exist-not-impl-rx	Indicates the total number of Block Confirm message received for Message type non-existent or not implemented. Trigger: When Block Confirm message is received by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-ie-param-non-exist-not-impl-rx	Indicates the total number of Block Confirm message received for Information element/parameter non-existent or not implemented. Trigger: When Block Confirm message is received by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-invalid-ie-contents-rx	Indicates the total number of Block Confirm message received for Invalid information element contents. Trigger: When Block Confirm message is received by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-recovery-on-timer-exp-rx	Indicates the total number of Block Confirm message received for Recovery on timer expiry. Trigger: When Block Confirm message is received by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32
blo-cfm-rx-msg-unrec-param-discard-rx	Indicates the total number of Block Confirm message received for Message with unrecognized parameter, discarded. Trigger: When Block Confirm message is received by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-req-tx	Indicates the total number of Unblock Request message transmitted. Trigger: When Unblock Request is Transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-req-rx	Indicates the total number of Unblock Request message received. Trigger: When Unblock Request is Received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx	Indicates the total number of Unblock Confirm message transmitted. Trigger: When Unblock Confirm message is transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-unallocated-no-tx	Indicates the total number of Unblock Confirm message transmitted for Unallocated (unassigned) number. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-no-route-to-dest-tx	Indicates the total number of Unblock Confirm message transmitted for No route to destination. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
unblo-cfm-tx-normal-unspecified-tx	Indicates the total number of Unblock Confirm message transmitted for Normal, unspecified. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-no-cir-channel-avail-tx	Indicates the total number of Unblock Confirm message transmitted for No circuit/channel available. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-nw-out-of-order-tx	Indicates the total number of Unblock Confirm message transmitted for Network out of order. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-temp-failure-tx	Indicates the total number of Unblock Confirm message transmitted for Temporary failure. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-switching-equip-congestion-tx	Indicates the total number of Unblock Confirm message transmitted for Switching equipment congestion. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-req-cir-channel-not-avail-tx	Indicates the total number of Unblock Confirm message transmitted for Requested circuit/channel not available. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-res-unavail-unspecified-tx	Indicates the total number of Unblock Confirm message transmitted for Resource unavailable, unspecified. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-aal-param-cant-be-supported-tx	Indicates the total number of Unblock Confirm message transmitted for AAL parameters cannot be supported. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-inv-msg-unspecified-tx	Indicates the total number of Unblock Confirm message transmitted for Invalid message, unspecified. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
unblo-cfm-tx-mandatory-ie-missing-tx	Indicates the total number of Unblock Confirm message transmitted for Mandatory information element is missing. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-msg-type-non-exist-not-impl-tx	Indicates the total number of Unblock Confirm message transmitted for Message type non-existent or not implemented. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-ie-param-non-exist-not-impl-tx	Indicates the total number of Unblock Confirm message transmitted for Information element/parameter non-existent or not implemented. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-invalid-ie-contents-tx	Indicates the total number of Unblock Confirm message transmitted for Invalid information element contents. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-recovery-on-timer-exp-tx	Indicates the total number of Unblock Confirm message transmitted for Recovery on timer expiry. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-tx-msg-unrec-param-discard-tx	Indicates the total number of Unblock Confirm message transmitted for Message with unrecognized parameter, discarded. Trigger: When Unblock Confirm message is transmitted by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx	Indicates the total number of Unblock Confirm message received. Trigger: When Unblock Confirm message is received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-unallocated-no-rx	Indicates the total number of Unblock Confirm message received for Unallocated (unassigned) number. Trigger: When Unblock Confirm message is received by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-no-route-to-dest-rx	Indicates the total number of Unblock Confirm message received for No route to destination. Trigger: When Unblock Confirm message is received by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
unblo-cfm-rx-normal-unspecified-rx	Indicates the total number of Unblock Confirm message received for Normal, unspecified. Trigger: When Unblock Confirm message is received by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-no-cir-channel-avail-rx	Indicates the total number of Unblock Confirm message received for No circuit/channel available. Trigger: When Unblock Confirm message is received by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-nw-out-of-order-rx	Indicates the total number of Unblock Confirm message received for Network out of order. Trigger: When Unblock Confirm message is received by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-temp-failure-rx	Indicates the total number of Unblock Confirm message received for Temporary failure. Trigger: When Unblock Confirm message is received by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-switching-equip-congestion-rx	Indicates the total number of Unblock Confirm message received for Switching equipment congestion. Trigger: When Unblock Confirm message is received by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-req-cir-channel-not-avail-rx	Indicates the total number of Unblock Confirm message received for Requested circuit/channel not available. Trigger: When Unblock Confirm message is received by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-res-unavail-unspecified-rx	Indicates the total number of Unblock Confirm message received for Resource unavailable, unspecified. Trigger: When Unblock Confirm message is received by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-aal-param-cant-be-supported-rx	Indicates the total number of Unblock Confirm message received for AAL parameters cannot be supported. Trigger: When Unblock Confirm message is received by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-inv-msg-unspecified-rx	Indicates the total number of Unblock Confirm message received for Invalid message, unspecified. Trigger: When Unblock Confirm message is received by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
unblo-cfm-rx-mandatory-ie-missing-rx	Indicates the total number of Unblock Confirm message received for Mandatory information element is missing. Trigger: When Unblock Confirm message is received by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-msg-type-non-exist-not-impl-rx	Indicates the total number of Unblock Confirm message received for Message type non-existent or not implemented. Trigger: When Unblock Confirm message is received by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-ie-param-non-exist-not-impl-rx	Indicates the total number of Unblock Confirm message received for Information element/parameter non-existent or not implemented. Trigger: When Unblock Confirm message is received by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-invalid-ie-contents-rx	Indicates the total number of Unblock Confirm message received for Invalid information element contents. Trigger: When Unblock Confirm message is received by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-recovery-on-timer-exp-rx	Indicates the total number of Unblock Confirm message received for Recovery on timer expiry. Trigger: When Unblock Confirm message is received by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32
unblo-cfm-rx-msg-unrec-param-discard-rx	Indicates the total number of Unblock Confirm message received for Message with unrecognized parameter, discarded. Trigger: When Unblock Confirm message is received by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32
reset-req-tx	Indicates the total number of Reset Request message transmitted. Trigger: When Reset Request is Transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
reset-req-rx	Indicates the total number of Reset Request message received. Trigger: When Reset Request is Received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx	Indicates the total number of Reset Confirm message transmitted. Trigger: When Reset Confirm message is transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-unallocated-no-tx	Indicates the total number of Reset Confirm message transmitted for Unallocated (unassigned) number. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
res-cfm-tx-no-route-to-dest-tx	Indicates the total number of Reset Confirm message transmitted for No route to destination. Trigger: When Reset Confirm message is transmitted by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-normal-unspecified-tx	Indicates the total number of Reset Confirm message transmitted for Normal, unspecified. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-no-cir-channel-avail-tx	Indicates the total number of Reset Confirm message transmitted for No circuit/channel available. Trigger: When Reset Confirm message is transmitted by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-nw-out-of-order-tx	Indicates the total number of Reset Confirm message transmitted for Network out of order. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-temp-failure-tx	Indicates the total number of Reset Confirm message transmitted for Temporary failure. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-switching-equip-congestion-tx	Indicates the total number of Reset Confirm message transmitted for Switching equipment congestion. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-req-cir-channel-not-avail-tx	Indicates the total number of Reset Confirm message transmitted for Requested circuit/channel not available. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-res-unavail-unspecified-tx	Indicates the total number of Reset Confirm message transmitted for Resource unavailable, unspecified. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-aal-param-cant-be-supported-tx	Indicates the total number of Reset Confirm message transmitted for AAL parameters cannot be supported. Trigger: When Reset Confirm message is transmitted by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
res-cfm-tx-inv-msg-unspecified-tx	Indicates the total number of Reset Confirm message transmitted for Invalid message, unspecified. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-mandatory-ie-missing-tx	Indicates the total number of Reset Confirm message transmitted for Mandatory information element is missing. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-msg-type-non-exist-not-impl-tx	Indicates the total number of Reset Confirm message transmitted for Message type non-existent or not implemented. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-ie-param-non-exist-not-impl-tx	Indicates the total number of Reset Confirm message transmitted for Information element/parameter non-existent or not implemented. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-invalid-ie-contents-tx	Indicates the total number of Reset Confirm message transmitted for Invalid information element contents. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-recovery-on-timer-exp-tx	Indicates the total number of Reset Confirm message transmitted for Recovery on timer expiry. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-tx-msg-unrec-param-discard-tx	Indicates the total number of Reset Confirm message transmitted for Message with unrecognized parameter, discarded. Trigger: When Reset Confirm message is transmitted by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx	Indicates the total number of Reset Confirm message received. Trigger: When Reset Confirm message is received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-unallocated-no-ix	Indicates the total number of Reset Confirm message received for Unallocated (unassigned) number. Trigger: When Reset Confirm message is received by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
res-cfm-rx-no-route-to-dest-rx	Indicates the total number of Reset Confirm message received for No route to destination. Trigger: When Reset Confirm message is received by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-normal-unspecified-rx	Indicates the total number of Reset Confirm message received for Normal, unspecified. Trigger: When Reset Confirm message is received by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-no-cir-channel-avail-rx	Indicates the total number of Reset Confirm message received for No circuit/channel available. Trigger: When Reset Confirm message is received by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-nw-out-of-order-rx	Indicates the total number of Reset Confirm message received for Network out of order. Trigger: When Reset Confirm message is received by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-temp-failure-rx	Indicates the total number of Reset Confirm message received for Temporary failure. Trigger: When Reset Confirm message is received by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-switching-equip-congestion-rx	Indicates the total number of Reset Confirm message received for Switching equipment congestion. Trigger: When Reset Confirm message is received by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-req-cir-channel-not-avail-rx	Indicates the total number of Reset Confirm message received for Requested circuit/channel not available. Trigger: When Reset Confirm message is received by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-res-unavail-unspecified-rx	Indicates the total number of Reset Confirm message received for Resource unavailable, unspecified. Trigger: When Reset Confirm message is received by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-aal-param-cant-be-supported-rx	Indicates the total number of Reset Confirm message received for AAL parameters cannot be supported. Trigger: When Reset Confirm message is received by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
res-cfm-rx-inv-msg- unspecified-rx	Indicates the total number of Reset Confirm message received for Invalid message, unspecified. Trigger: When Reset Confirm message is received by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-mandatory-ie- missing-rx	Indicates the total number of Reset Confirm message received for Mandatory information element is missing. Trigger: When Reset Confirm message is received by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-msg-type-non- exist-not-impl-rx	Indicates the total number of Reset Confirm message received for Message type non-existent or not implemented. Trigger: When Reset Confirm message is received by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-ie-param-non- exist-not-impl-rx	Indicates the total number of Reset Confirm message received for Information element/parameter non-existent or not implemented. Trigger: When Reset Confirm message is received by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-invalid-ie- contents-rx	Indicates the total number of Reset Confirm message received for Invalid information element contents. Trigger: When Reset Confirm message is received by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-recovery-on- timer-exp-rx	Indicates the total number of Reset Confirm message received for Recovery on timer expiry. Trigger: When Reset Confirm message is received by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32
res-cfm-rx-msg-unrec- param-discard-rx	Indicates the total number of Reset Confirm message received for Message with unrecognized parameter, discarded. Trigger: When Reset Confirm message is received by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx	Indicates the total number of Confusion message transmitted. Trigger: When Confusion message is transmitted by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-unallocated-no- tx	Indicates the total number of Confusion message transmitted for Unallocated (unassigned) number. Trigger: When Confusion message is transmitted by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
confusion-tx-no-route-to-dest-tx	Indicates the total number of Confusion message transmitted for No route to destination. Trigger: When Confusion message is transmitted by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-normal-unspecified-tx	Indicates the total number of Confusion message transmitted for Normal, unspecified. Trigger: When Confusion message is transmitted by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-no-cir-channel-avail-tx	Indicates the total number of Confusion message transmitted for No circuit/channel available. Trigger: When Confusion message is transmitted by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-nw-out-of-order-tx	Indicates the total number of Confusion message transmitted for Network out of order. Trigger: When Confusion message is transmitted by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-temp-failure-tx	Indicates the total number of Confusion message transmitted for Temporary failure. Trigger: When Confusion message is transmitted by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-switching-equip-congestion-tx	Indicates the total number of Confusion message transmitted for Switching equipment congestion. Trigger: When Confusion message is transmitted by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-req-cir-channel-not-avail-tx	Indicates the total number of Confusion message transmitted for Requested circuit/channel not available. Trigger: When Confusion message is transmitted by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-res-unavail-unspecified-tx	Indicates the total number of Confusion message transmitted for Resource unavailable, unspecified. Trigger: When Confusion message is transmitted by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-aal-param-cant-be-supported-tx	Indicates the total number of Confusion message transmitted for AAL parameters cannot be supported. Trigger: When Confusion message is transmitted by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
confusion-tx-inv-msg- unspecified-tx	Indicates the total number of Confusion message transmitted for Invalid message, unspecified. Trigger: When Confusion message is transmitted by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-mandatory-ie- missing-tx	Indicates the total number of Confusion message transmitted for Mandatory information element is missing. Trigger: When Confusion message is transmitted by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-msg-type-non- exist-not-impl-tx	Indicates the total number of Confusion message transmitted for Message type non-existent or not implemented. Trigger: When Confusion message is transmitted by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-ie-param-non- exist-not-impl-tx	Indicates the total number of Confusion message transmitted for Information element/parameter non-existent or not implemented. Trigger: When Confusion message is transmitted by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-invalid-ie- contents-tx	Indicates the total number of Confusion message transmitted for Invalid information element contents. Trigger: When Confusion message is transmitted by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-recovery-on- timer-exp-tx	Indicates the total number of Confusion message transmitted for Recovery on timer expiry. Trigger: When Confusion message is transmitted by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-tx-msg-unrec- param-discard-tx	Indicates the total number of Confusion message transmitted for Message with unrecognized parameter, discarded. Trigger: When Confusion message is transmitted by ALCAP Service for Message with unrecognized parameter, discarded. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx	Indicates the total number of Confusion message received. Trigger: When Confusion message is received by ALCAP Service. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-unallocated-no- rx	Indicates the total number of Confusion message received for Unallocated (unassigned) number. Trigger: When Confusion message is received by ALCAP Service for Unallocated (unassigned) number. Availability: Across all ALCAP Services.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
confusion-rx-no-route-to-dest-rx	Indicates the total number of Confusion message received for No route to destination. Trigger: When Confusion message is received by ALCAP Service for No route to destination. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-normal-unspecified-rx	Indicates the total number of Confusion message received for Normal, unspecified. Trigger: When Confusion message is received by ALCAP Service for Normal, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-no-cir-channel-avail-rx	Indicates the total number of Confusion message received for No circuit/channel available. Trigger: When Confusion message is received by ALCAP Service for No circuit/channel available. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-nw-out-of-order-rx	Indicates the total number of Confusion message received for Network out of order. Trigger: When Confusion message is received by ALCAP Service for Network out of order. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-temp-failure-rx	Indicates the total number of Confusion message received for Temporary failure. Trigger: When Confusion message is received by ALCAP Service for Temporary failure. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-switching-equip-congestion-rx	Indicates the total number of Confusion message received for Switching equipment congestion. Trigger: When Confusion message is received by ALCAP Service for Switching equipment congestion. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-req-cir-channel-not-avail-rx	Indicates the total number of Confusion message received for Requested circuit/channel not available. Trigger: When Confusion message is received by ALCAP Service for Requested circuit/channel not available. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-res-unavail-unspecified-rx	Indicates the total number of Confusion message received for Resource unavailable, unspecified. Trigger: When Confusion message is received by ALCAP Service for Resource unavailable, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-aal-param-cant-be-supported-rx	Indicates the total number of Confusion message received for AAL parameters cannot be supported. Trigger: When Confusion message is received by ALCAP Service for AAL parameters cannot be supported. Availability: Across all ALCAP Services.	Unsigned Int32

Variables	Description	Data Type
confusion-rx-inv-msg- unspecified-rx	Indicates the total number of Confusion message received for Invalid message, unspecified. Trigger: When Confusion message is received by ALCAP Service for Invalid message, unspecified. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-mandatory-ie- missing-rx	Indicates the total number of Confusion message received for Mandatory information element is missing. Trigger: When Confusion message is received by ALCAP Service for Mandatory information element is missing. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-msg-type-non- exist-not-impl-rx	Indicates the total number of Confusion message received for Message type non-existent or not implemented. Trigger: When Confusion message is received by ALCAP Service for Message type non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-ie-param-non- exist-not-impl-rx	Indicates the total number of Confusion message received for Information element/parameter non-existent or not implemented. Trigger: When Confusion message is received by ALCAP Service for Information element/parameter non-existent or not implemented. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-invalid-ie- contents-rx	Indicates the total number of Confusion message received for Invalid information element contents. Trigger: When Confusion message is received by ALCAP Service for Invalid information element contents. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-recovery-on- timer-exp-rx	Indicates the total number of Confusion message received for Recovery on timer expiry. Trigger: When Confusion message is received by ALCAP Service for Recovery on timer expiry. Availability: Across all ALCAP Services.	Unsigned Int32
confusion-rx-msg-unrec- param-discard-rx	Indicates the total number of Confusion message received for Message with unrecognized parameter or discarded. Trigger: When Confusion message is received by ALCAP Service for Message with unrecognized parameter/discarded. Availability: Across all ALCAP Services	Unsigned Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 4

APN Schema Statistics

The APN schema provides operational statistics that can be used for monitoring and troubleshooting the following products: GGSN, P-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 4. Bulk Statistics Variables in the APN Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the APN configuration. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the APN configuration. This is an internal reference number. Type: Information	Int32
apn	The name of the APN for which statistics are displayed. This is a key variable. Type: Information	String
uplnk-bytes	The number of bytes sent from the APN towards Internet/PDN on the Gi interface. Type: Counter	Int64
dnlnk-bytes	The number of bytes sent from the APN towards MS on the GTP interface. Type: Counter	Int64
uplnk-pkts	The number of IP packets sent from the APN towards Internet/PDN on the Gi interface. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
dnlnk-pkts	The number of IP packets sent from the APN towards MS on the GTP interface. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
uplnk-bytes-drop	The number of bytes sent from the APN towards Internet/PDN on the Gi interface dropped. Type: Counter	Int64
dnlnk-bytes-drop	The number of bytes sent from the APN towards MS on the GTP interface dropped. Type: Counter	Int64
uplnk-drop	The number of IP packets sent from the APN towards Internet/PDN on the Gi interface dropped. Type: Counter	Int32
dnlnk-drop	The number of IP packets sent from the APN towards MS on the GTP interface dropped. Type: Counter	Int32
bad-hdr	The total number of IP packets received and dropped due to bad header. Type: Counter	Int32
ttl-excd	The number of IP packets dropped because they were received with a TTL value of 0. Type: Counter	Int32
frag-sent	The number of times IP packets were fragmented before sending on the GTP tunnel. Type: Counter	Int32
frag-fail	The number of packets which failed in fragmentation. Type: Counter	Int32

Variables	Description	Data Type
inacl-drop	The number of IP packets received that were dropped due to ACL filtering. Type: Counter	Int32
outacl-drop	The number of outbound IP packets that were dropped due to ACL filtering. Type: Counter	Int32
inexcd-mbr-pkt-drop	Data Statistics – IP input excd MBR packets dropped Type: Counter	Int32
outexcd-mbr-pkt-drop	Data Statistics – IP output excd MBR packets dropped Type: Counter	Int32
inexcd-gbr-pkt-drop	Data Statistics – IP input excd GBR packets dropped Type: Counter	Int32
outexcd-gbr-pkt-drop	Data Statistics – IP output excd GBR packets dropped Type: Counter	Int32
inexcd-ambr-pkt-drop	Data Statistics – IP in excd APN packets AMBR dropped Type: Counter	Int32
outexcd-ambr-pkt-drop	Data Statistics – IP out excd APN packets AMBR dropped Type: Counter	Int32
inmisc-pkt-drop	Data Statistics – IP input misc packets dropped Type: Counter	Int32
outmisc-pkt-drop	Data Statistics – IP output misc packets dropped Type: Counter	Int32
inexcd-mbr-byte-drop	Data Statistics – IP input excd MBR bytes dropped Type: Counter	Int32
outexcd-mbr-byte-drop	Data Statistics – IP output excd MBR bytes dropped Type: Counter	Int32
inexcd-gbr-byte-drop	Data Statistics – IP input excd GBR bytes dropped Type: Counter	Int32
outexcd-gbr-byte-drop	Data Statistics – IP output excd GBR bytes dropped Type: Counter	Int32
inexcd-ambr-byte-drop	Data Statistics – IP in excd APN AMBR bytes dropped Type: Counter	Int32
outexcd-ambr-byte-drop	Data Statistics – IP out excd APN AMBR bytes dropped Type: Counter	Int32
inmisc-byte-drop	Data Statistics – IP input misc bytes dropped Type: Counter	Int32
outmisc-byte-drop	Data Statistics – IP output misc bytes dropped Type: Counter	Int32
bad-src-addr	The number of IP packets received for which a source violation was detected resulting in the packets being dropped. Type: Counter	Int32

Variables	Description	Data Type
addr-stat	The total number of PDP contexts facilitated by the APN that used static IP addresses. Type: Counter	Int32
addr-lpool	The total number of PDP contexts facilitated by the APN that were allocated IP addresses from pools configured locally. Type: Counter	Int32
addr-rad	The total number of PDP contexts facilitated by the APN that were allocated IP addresses from a RADIUS server. Type: Counter	Int32
addr-dhcp	The total number of PDP contexts facilitated by the APN that were allocated IP addresses from DHCP. Type: Counter	Int32
addr-dhcp-rlly	The total number of PDP contexts facilitated by the APN that were allocated IP addresses by DHCP Relay. Type: Counter	Int32
addr-no-alloc	The total number of PDP contexts facilitated by the APN that were not allocated IP addresses. Type: Counter	Int32
sess-curr	The number of PDP contexts currently facilitated by the APN. Type: Gauge	Int32
sess-curr-all	The total number of PDP contexts currently being facilitated by the entire system. Type: Gauge	Int32
sess-tot	The total number of PDP contexts facilitated by the APN. Type: Counter	Int32
sess-tot-all	The total number of PDP contexts that have been facilitated by the entire system. Type: Counter	Int32
att-pdp-ctxt	The total CPC req per APN Type: Counter	Int32
att-deact-pdp-ggsn	The total DPC Req Tx per APN Type: Counter	Int32
succ-deact-pdp-ggsn	The total DPC Req Tx Accepted Type: Counter	Int32
att-deact-pdp-ms	The total DPC Req Rx per APN Type: Counter	Int32
succ-deact-pdp-ms	The total Deactivate PDP Context Req successful from MS. Type: Counter	Int32
dyn-ipv4-attempt	The total number of IPv4 PDP contexts requesting dynamically assigned IP addresses that were attempted. Type: Counter	Int32
dyn-ipv6-attempt	The total number of IPv6 PDP contexts requesting dynamically assigned IP addresses that were attempted. Type: Counter	Int32

Variables	Description	Data Type
dyn-ipv4-success	The total number of IPv4 PDP contexts requesting dynamically assigned IP addresses that were successfully setup. Type: Counter	Int32
dyn-ipv6-success	The total number of IPv6 PDP contexts requesting dynamically assigned IP addresses that were successfully setup. Type: Counter	Int32
data-fromuseravg-bps	The sum of average data rate in bits per seconds (bps) from all the users under this VPN. Type: Gauge	Int64
data-touseravg-bps	The sum of average data rate in bps towards all the users under this VPN. Type: Gauge	Int64
data-fromusersust-bps	The sustained data rate in bps from the user. Type: Gauge	Int64
data-tousersust-bps	The sustained data rate in bps towards the user. Type: Gauge	Int64
data-fromuseravg-pps	The average data rate in packets per seconds (pps) from the user. Type: Gauge	Int64
data-touseravg-pps	The average data rate in pps towards the user. Type: Gauge	Int64
data-fromusersust-pps	The sustained data rate in pps from the user. Type: Gauge	Int64
data-tousersust-pps	The sustained data rate in pps towards the user. Type: Gauge	Int64
qosconv-pkts-uplnk	The number of packets with Conversational QoS sent from the APN towards Internet/PDN on the Gi interface. Type: Counter	Int32
qosconv-pkts-dnlnk	The number of packets with Conversational QoS sent from the APN towards MS on the GTP interface. Type: Counter	Int32
qosstrm-pkts-uplnk	The number of packets with Streaming QoS sent from the APN towards Internet/PDN on the Gi interface. Type: Counter	Int32
qosstrm-pkts-dnlnk	The number of packets with Streaming QoS sent from the APN towards MS on the GTP interface. Type: Counter	Int32
qosint1-pkts-uplnk	The number of packets with Interactive QoS for priority 1 sent from the APN towards Internet/PDN on the Gi interface. Type: Counter	Int32
qosint1-pkts-dnlnk	The number of packets with Interactive QoS for priority 1 sent from the APN towards MS on the GTP interface. Type: Counter	Int32

Variables	Description	Data Type
qosint2-pkts-uplnk	The number of packets with Interactive QoS for priority 2 sent from the APN towards Internet/PDN on the Gi interface. Type: Counter	Int32
qosint2-pkts-dnlnk	The number of packets with Interactive QoS for priority 2 sent from the APN towards MS on the GTP interface. Type: Counter	Int32
qosint3-pkts-uplnk	The number of packets with Interactive QoS for priority 3 sent from the APN towards Internet/PDN on the Gi interface. Type: Counter	Int32
qosint3-pkts-dnlnk	The number of packets with Interactive QoS for priority 3 sent from the APN towards MS on the GTP interface. Type: Counter	Int32
qosint-pkts-uplnk	Total number of packets with Interactive QoS for all priorities (priority 1, 2, and 3) sent from the APN towards Internet/PDN on the Gi interface. Type: Counter	Int32
qosint-pkts-dnlnk	Total number of packets with Interactive QoS for all priorities (priority 1, 2, and 3) sent from the APN towards MS on the GTP interface. Type: Counter	Int32
qosback-pkts-uplnk	The number of packets with Background QoS sent from the APN towards Internet/PDN on the Gi interface. Type: Counter	Int32
qosback-pkts-dnlnk	The number of packets with Background QoS sent from the APN towards MS on the GTP interface. Type: Counter	Int32
auth-req-sent	The total authentication requests sent from the APN towards AAA on Ga interface. Type: Counter	Int32
auth-acc-rcvd	The total authentication accept messages received by the APN on Ga Interface from AAA. Type: Counter	Int32
auth-timeout	The total authentication requests that timed out. Type: Counter	Int32
acc-req-sent	The total accounting requests sent from the APN towards AAA on Ga interface. Type: Counter	Int32
acc-rsp-rcvd	The total accounting response messages received by the APN on Ga Interface from AAA. Type: Counter	Int32
acc-req-timeout	The total accounting requests that timed out. Type: Counter	Int32
act-defbear	The total number of active default bearers. Type: Gauge	Int32
act-dedbear	The total number of active dedicated bearers. Type: Gauge	Int32

Variables	Description	Data Type
setup-defbear	The total number of default bearers setup. Type: Counter	Int32
setup-dedbear	The total number of dedicated bearers setup. Type: Counter	Int32
rel-defbear	The total number of released default bearers. Type: Counter	Int32
rel-dedbear	The total number of released dedicated bearers. Type: Counter	Int32
rel-fail-defbear	The total number of default bearers with release failures. Type: Counter	Int32
rel-fail-dedbear	The total number of dedicated bearers with release failures. Type: Counter	Int32
rej-defbear	The total number of rejected default bearers. Type: Counter	Int32
rej-dedbear	The total number of rejected dedicated bearers. Type: Counter	Int32
mod-uebear	The total number of UE-initiated modified bearers. Type: Counter	Int32
mod-nwbear	The total number of network-initiated modified bearers. Type: Counter	Int32
ue-init-modfail	The total number of failed UE-initiated modified bearers. Type: Counter	Int32
nw-init-modfail	The total number of failed network-initiated modified bearers. Type: Counter	Int32
pdn-ipv4-actsess	The total number of active IPv4 sessions. Type: Gauge	Int32
pdn-ipv4-setupsess	The total number of IPv4 session setup. Type: Counter	Int32
pdn-ipv4-relsess	The total number of released IPv4 sessions. Type: Counter	Int32
pdn-ipv6-actsess	The total number of active IPv6 sessions. Type: Gauge	Int32
pdn-ipv6-setupsess	The total number of IPv6 session setup. Type: Counter	Int32
pdn-ipv6-relsess	The total number of released IPv6 sessions. Type: Counter	Int32
pdn-ipv4v6-actsess	The total number of active IPv4-in-IPv6 sessions. Type: Gauge	Int32
pdn-ipv4v6-setupsess	The total number of IPv4-in-IPv6 session setup. Type: Counter	Int32

Variables	Description	Data Type
pdn-ipv4v6-relsess	The total number of released IPv4-in-IPv6 sessions. Type: Counter	Int32
addr-ipv6-stateless-autocnf	The total number of allocated IPv6 addresses from stateless auto-configuration. Type: Counter	Int32
qci1-actbear	The total number of QCI1 active bearers. Type: Gauge	v12.0 and earlier: Int32 v12.2 and later: Int64
qci1-setupbear	The total number of QCI1 bearers setup. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci1-relbear	The total number of QCI1 released bearers. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci1-uplinkpkt-fwd	The total number of QCI1 uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci1-dwlinkpkt-fwd	The total number of QCI1 downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci1-uplinkbyte-fwd	The total number of QCI1 uplink bytes forwarded. Type: Counter	Int64
qci1-dwlinkbyte-fwd	The total number of QCI1 downlink bytes forwarded. Type: Counter	Int64
qci1-uplinkpkt-drop	The total number of QCI1 uplink packets dropped. Type: Counter	Int32
qci1-dwlinkpkt-drop	The total number of QCI1 downlink packets dropped. Type: Counter	Int32
qci1-uplinkbyte-drop	The total number of QCI1 uplink bytes dropped. Type: Counter	Int64
qci1-dwlinkbyte-drop	The total number of QCI1 downlink bytes dropped. Type: Counter	Int64
qci2-actbear	The total number of QCI2 active bearers. Type: Gauge	v12.0 and earlier: Int32 v12.2 and later: Int64
qci2-setupbear	The total number of QCI2 bearers setup. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64

Variables	Description	Data Type
qci2-relbear	The total number of QCI2 released bearers. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci2-uplinkpkt-fwd	The total number of QCI2 uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci2-dwlinkpkt-fwd	The total number of QCI2 downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci2-uplinkbyte-fwd	The total number of QCI2 uplink bytes forwarded. Type: Counter	Int64
qci2-dwlinkbyte-fwd	The total number of QCI2 downlink bytes forwarded. Type: Counter	Int64
qci2-uplinkpkt-drop	The total number of QCI2 uplink packets dropped. Type: Counter	Int32
qci2-dwlinkpkt-drop	The total number of QCI2 downlink packets dropped. Type: Counter	Int32
qci2-uplinkbyte-drop	The total number of QCI2 uplink bytes dropped. Type: Counter	Int64
qci2-dwlinkbyte-drop	The total number of QCI2 downlink bytes dropped. Type: Counter	Int64
qci3-actbear	The total number of QCI3 active bearers. Type: Gauge	v12.0 and earlier: Int32 v12.2 and later: Int64
qci3-setupbear	The total number of QCI3 bearers setup. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci3-relbear	The total number of QCI3 released bearers. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci3-uplinkpkt-fwd	The total number of QCI3 uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci3-dwlinkpkt-fwd	The total number of QCI3 downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64

Variables	Description	Data Type
qci3-uplinkbyte-fwd	The total number of QCI3 uplink bytes forwarded. Type: Counter	Int64
qci3-dwlinkbyte-fwd	The total number of QCI3 downlink bytes forwarded. Type: Counter	Int64
qci3-uplinkpkt-drop	The total number of QCI3 uplink packets dropped. Type: Counter	Int32
qci3-dwlinkpkt-drop	The total number of QCI3 downlink packets dropped. Type: Counter	Int32
qci3-uplinkbyte-drop	The total number of QCI3 uplink bytes dropped. Type: Counter	Int64
qci3-dwlinkbyte-drop	The total number of QCI3 downlink bytes dropped. Type: Counter	Int64
qci4-actbear	The total number of QCI4 active bearers. Type: Gauge	v12.0 and earlier: Int32 v12.2 and later: Int64
qci4-setupbear	The total number of QCI4 bearers setup. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci4-relbear	The total number of QCI4 released bearers. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci4-uplinkpkt-fwd	The total number of QCI4 uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci4-dwlinkpkt-fwd	The total number of QCI4 downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci4-uplinkbyte-fwd	The total number of QCI4 uplink bytes forwarded. Type: Counter	Int64
qci4-dwlinkbyte-fwd	The total number of QCI4 downlink bytes forwarded. Type: Counter	Int64
qci4-uplinkpkt-drop	The total number of QCI4 uplink packets dropped. Type: Counter	Int32
qci4-dwlinkpkt-drop	The total number of QCI4 downlink packets dropped. Type: Counter	Int32
qci4-uplinkbyte-drop	The total number of QCI4 uplink bytes dropped. Type: Counter	Int64

Variables	Description	Data Type
qci4-dwlinkbyte-drop	The total number of QCI4 downlink bytes dropped. Type: Counter	Int64
qci5-actbear	The total number of QCI5 active bearers. Type: Gauge	v12.0 and earlier: Int32 v12.2 and later: Int64
qci5-setupbear	The total number of QCI5 bearers setup. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci5-relbear	The total number of QCI5 released bearers. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci5-uplinkpkt-fwd	The total number of QCI5 uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci5-dwlinkpkt-fwd	The total number of QCI5 downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci5-uplinkbyte-fwd	The total number of QCI5 uplink bytes forwarded. Type: Counter	Int64
qci5-dwlinkbyte-fwd	The total number of QCI5 downlink bytes forwarded. Type: Counter	Int64
qci5-uplinkpkt-drop	The total number of QCI5 uplink packets dropped. Type: Counter	Int32
qci5-dwlinkpkt-drop	The total number of QCI5 downlink packets dropped. Type: Counter	Int32
qci5-uplinkbyte-drop	The total number of QCI5 uplink bytes dropped. Type: Counter	Int64
qci5-dwlinkbyte-drop	The total number of QCI5 downlink bytes dropped. Type: Counter	Int64
qci6-actbear	The total number of QCI6 active bearers. Type: Gauge	v12.0 and earlier: Int32 v12.2 and later: Int64
qci6-setupbear	The total number of QCI6 bearers setup. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64

Variables	Description	Data Type
qci6-relbear	The total number of QCI6 released bearers. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci6-uplinkpkt-fwd	The total number of QCI6 uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci6-dwlinkpkt-fwd	The total number of QCI6 downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci6-uplinkbyte-fwd	The total number of QCI6 uplink bytes forwarded. Type: Counter	Int64
qci6-dwlinkbyte-fwd	The total number of QCI6 downlink bytes forwarded. Type: Counter	Int64
qci6-uplinkpkt-drop	The total number of QCI6 uplink packets dropped. Type: Counter	Int32
qci6-dwlinkpkt-drop	The total number of QCI6 downlink packets dropped. Type: Counter	Int32
qci6-uplinkbyte-drop	The total number of QCI6 uplink bytes dropped. Type: Counter	Int64
qci6-dwlinkbyte-drop	The total number of QCI6 downlink bytes dropped. Type: Counter	Int64
qci7-actbear	The total number of QCI7 active bearers. Type: Gauge	v12.0 and earlier: Int32 v12.2 and later: Int64
qci7-setupbear	The total number of QCI7 bearers setup. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci7-relbear	The total number of QCI7 released bearers. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci7-uplinkpkt-fwd	The total number of QCI7 uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci7-dwlinkpkt-fwd	The total number of QCI7 downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64

Variables	Description	Data Type
qci7-uplinkbyte-fwd	The total number of QCI7 uplink bytes forwarded. Type: Counter	Int64
qci7-dwlinkbyte-fwd	The total number of QCI7 downlink bytes forwarded. Type: Counter	Int64
qci7-uplinkpkt-drop	The total number of QCI7 uplink packets dropped. Type: Counter	Int32
qci7-dwlinkpkt-drop	The total number of QCI7 downlink packets dropped. Type: Counter	Int32
qci7-uplinkbyte-drop	The total number of QCI7 uplink bytes dropped. Type: Counter	Int64
qci7-dwlinkbyte-drop	The total number of QCI7 downlink bytes dropped. Type: Counter	Int64
qci8-actbear	The total number of QCI8 active bearers. Type: Gauge	v12.0 and earlier: Int32 v12.2 and later: Int64
qci8-setupbear	The total number of QCI8 bearers setup. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci8-relbear	The total number of QCI8 released bearers. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci8-uplinkpkt-fwd	The total number of QCI8 uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci8-dwlinkpkt-fwd	The total number of QCI8 downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci8-uplinkbyte-fwd	The total number of QCI8 uplink bytes forwarded. Type: Counter	Int64
qci8-dwlinkbyte-fwd	The total number of QCI8 downlink bytes forwarded. Type: Counter	Int64
qci8-uplinkpkt-drop	The total number of QCI8 uplink packets dropped. Type: Counter	Int32
qci8-dwlinkpkt-drop	The total number of QCI8 downlink packets dropped. Type: Counter	Int32
qci8-uplinkbyte-drop	The total number of QCI8 uplink bytes dropped. Type: Counter	Int64

Variables	Description	Data Type
qci8-dwlinkbyte-drop	The total number of QCI8 downlink bytes dropped. Type: Counter	Int64
qci9-actbear	The total number of QCI9 active bearers. Type: Gauge	v12.0 and earlier: Int32 v12.2 and later: Int64
qci9-setupbear	The total number of QCI9 bearers setup. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci9-relbear	The total number of QCI9 released bearers. Type: Counter	v12.0 and earlier: Int32 v12.2 and later: Int64
qci9-uplinkpkt-fwd	The total number of QCI9 uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci9-dwlinkpkt-fwd	The total number of QCI9 downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
qci9-uplinkbyte-fwd	The total number of QCI9 uplink bytes forwarded. Type: Counter	Int64
qci9-dwlinkbyte-fwd	The total number of QCI9 downlink bytes forwarded. Type: Counter	Int64
qci9-uplinkpkt-drop	The total number of QCI9 uplink packets dropped. Type: Counter	Int32
qci9-dwlinkpkt-drop	The total number of QCI9 downlink packets dropped. Type: Counter	Int32
qci9-uplinkbyte-drop	The total number of QCI9 uplink bytes dropped. Type: Counter	Int64
qci9-dwlinkbyte-drop	The total number of QCI9 downlink bytes dropped. Type: Counter	Int64
nonstdqci-nongbr-actbear	The total number of non-standard QCI, non-GBR active bearers. Type: Gauge	Int32
nonstdqci-nongbr-setupbear	The total number of non-standard QCI, non-GBR bearers setup. Type: Counter	Int32
nonstdqci-nongbr-relbear	The total number of non-standard QCI, non-GBR released bearers. Type: Counter	Int32

Variables	Description	Data Type
nonstdqci-nongbr-uplinkpkt-fwd	The total number of non-standard QCI, non-GBR uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
nonstdqci-nongbr-dwlinkpkt-fwd	The total number of non-standard QCI, non-GBR downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
nonstdqci-nongbr-uplinkbyte-fwd	The total number of non-standard QCI, non-GBR uplink bytes forwarded. Type: Counter	Int64
nonstdqci-nongbr-dwlinkbyte-fwd	The total number of non-standard QCI, non-GBR downlink bytes forwarded. Type: Counter	Int64
nonstdqci-nongbr-uplinkpkt-drop	The total number of non-standard QCI, non-GBR uplink packets dropped. Type: Counter	Int32
nonstdqci-nongbr-dwlinkpkt-drop	The total number of non-standard QCI, non-GBR downlink packets dropped. Type: Counter	Int32
nonstdqci-nongbr-uplinkbyte-drop	The total number of non-standard QCI, non-GBR uplink bytes dropped. Type: Counter	Int64
nonstdqci-nongbr-dwlinkbyte-drop	The total number of non-standard QCI, non-GBR downlink bytes dropped. Type: Counter	Int64
nonstdqci-gbr-actbear	The total number of non-standard QCI, GBR active bearers. Type: Gauge	Int32
nonstdqci-gbr-setupbear	The total number of non-standard QCI, GBR bearers setup. Type: Counter	Int32
nonstdqci-gbr-relbear	The total number of non-standard QCI, GBR released bearers. Type: Counter	Int32
nonstdqci-gbr-uplinkpkt-fwd	The total number of non-standard QCI, GBR uplink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
nonstdqci-gbr-dwlinkpkt-fwd	The total number of non-standard QCI, GBR downlink packets forwarded. Type: Counter	v12.2 and earlier: Int32 v12.3/14.0 and later: Int64
nonstdqci-gbr-uplinkbyte-fwd	The total number of non-standard QCI, GBR uplink bytes forwarded. Type: Counter	Int64
nonstdqci-gbr-dwlinkbyte-fwd	The total number of non-standard QCI, GBR downlink bytes forwarded. Type: Counter	Int64
nonstdqci-gbr-uplinkpkt-drop	The total number of non-standard QCI, GBR uplink packets dropped. Type: Counter	Int32
nonstdqci-gbr-dwlinkpkt-drop	The total number of non-standard QCI, GBR downlink packets dropped. Type: Counter	Int32

Variables	Description	Data Type
nonstdqci-gbr-uplinkbyte-drop	The total number of non-standard QCI, GBR uplink bytes dropped. Type: Counter	Int64
nonstdqci-gbr-dwlinkbyte-drop	The total number of non-standard QCI, GBR downlink bytes dropped. Type: Counter	Int64



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 5

ASNGW Schema Statistics

The ASNGW schema provides operational statistics that can be used for monitoring and troubleshooting the following products: ASNGW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 5. Bulk Statistic Variables ASN-GW Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the ASN GW service. This is a key variable.	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the ASN GW service. This is an internal reference number. This is a key variable.	Int32
servname	The name of the ASN GW service for which the statistics are displayed. This is a key variable.	String
servid	The identification number of the ASN GW service for which the statistics are displayed. This is a key variable.	Int32
peeripaddr	IP address of the peer ASN GW.	String
r6mspreattreq-totsent	The total number of MS pre-attachment request messages sent on the R6 interface.	Int32
r6mspreattreq-retranssent	The total number of MS pre-attachment request messages re-transmitted on the R6 interface.	Int32
r6mspreattreq-totsend fail	The total number of failures occurred during transaction ID generation and R6 MS Pre-attachment request message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6mspreattreq-totrec	The total number of MS pre-attachment request messages received on the R6 interface.	Int32
r6mspreattreq-totacc	The total number of MS pre-attachment request messages accepted on the R6 interface.	Int32
r6mspreattreq-totrelay	The total number of MS pre-attachment request messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a MS pre-attachment request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6mspreattreq-totdenied	The total number of MS pre-attachment request messages denied on the R6 interface.	Int32
r6mspreattreq-totdiscard	The total number of MS pre-attachment request messages discarded on the R6 interface.	Int32
r6mspreattreq-badform	The total number of badly formed MS pre-attachment request messages on the R6 interface.	Int32
r6mspreattreq-decodeerr	The total number of MS pre-attachment request messages on the R6 interface with decode error.	Int32
r6mspreattreq-unspecerr	The total number of MS pre-attachment request messages on the R6 interface with unspecified error.	Int32
r6mspreattreq-missmandtlv	The total number of MS pre-attachment request messages on the R6 interface with missing mandatory TLVs.	Int32
r6mspreattreq-tlvvalinval	The total number of MS pre-attachment request messages on the R6 interface with invalid TLV value.	Int32
r6mspreattreq-unknownnltv	The total number of MS pre-attachment request messages on the R6 interface with unknown TLVs.	Int32
r6mspreattreq-duptlvfound	The total number of MS pre-attachment request messages on the R6 interface with duplicate TLVs.	Int32
r6mspreattreq-nosessfound	The total number of MS pre-attachment request messages on the R6 interface without any session information.	Int32

Variables	Description	Data Type
r6mspreattreq-adminprohib	The total number of MS pre-attachment request messages discarded or denied due to admin prohibit. Triggers: Changes every time a MS pre-attachment request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6mspreattreq-noresourcedrop	The total number of MS pre-attachment request messages discarded or denied due to resource unavailability. Triggers: Changes every time a MS pre-attachment request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6mspreattreq-transiderr	The total number of MS pre-attachment request messages on the R6 interface with transaction ID errors.	Int32
r6mspreattresp-totsent	The total number of MS pre-attachment response messages sent on the R6 interface.	Int32
r6mspreattresp-retranssent	The total number of MS pre-attachment response messages re-transmitted on the R6 interface.	Int32
r6mspreattresp-totsendfail	The total number of failures occurred during transaction ID generation and R6 MS Pre-attachment response message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6mspreattresp-totrec	The total number of MS pre-attachment response messages received on the R6 interface.	Int32
r6mspreattresp-totacc	The total number of MS pre-attachment response messages accepted on the R6 interface.	Int32
r6mspreattresp-totrelay	The total number of MS pre-attachment response messages denied on the R6 interface.	Int32
r6mspreattresp-totdenied	The total number of MS pre-attachment response messages discarded on the R6 interface.	Int32
r6mspreattresp-totdiscard	The total number of badly formed MS pre-attachment response messages on the R6 interface.	Int32
r6mspreattresp-badform	The total number of MS pre-attachment response messages on the R6 interface with decode error.	Int32
r6mspreattresp-decodeerr	The total number of MS pre-attachment response messages on the R6 interface with unspecified error.	Int32
r6mspreattresp-unspecerr	The total number of MS pre-attachment response messages on the R6 interface with missing mandatory TLVs.	Int32
r6mspreattresp-missmandtlv	The total number of MS pre-attachment response messages on the R6 interface with invalid TLV value.	Int32
r6mspreattresp-tlvvalinval	The total number of MS pre-attachment response messages denied on the R6 interface.	Int32
r6mspreattresp-unknownltlv	The total number of MS pre-attachment response messages on the R6 interface with unknown TLVs.	Int32
r6mspreattresp-duptlvfound	The total number of MS pre-attachment response messages on the R6 interface with duplicate TLVs.	Int32
r6mspreattresp-nosessfound	The total number of MS pre-attachment response messages on the R6 interface without any session information.	Int32

Variables	Description	Data Type
r6mspreattresp-adminprohib	The total number of MS pre-attachment response messages discarded or denied due to admin prohibit. Triggers: Changes every time a MS pre-attachment response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6mspreattresp-noresourcedrop	The total number of MS pre-attachment response messages discarded or denied due to resource unavailability. Triggers: Changes every time a MS pre-attachment response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6mspreattresp-transiderr	The total number of MS pre-attachment response messages on the R6 interface with transaction ID errors.	Int32
r6mspreattack-totsent	The total number of MS pre-attachment acknowledgement messages sent on the R6 interface.	Int32
r6mspreattack-retranssent	The total number of MS pre-attachment acknowledgement messages re-transmitted on the R6 interface.	Int32
r6mspreattack-totsendfail	The total number of failures occurred during transaction ID generation and R6 MS Pre-attachment acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6mspreattack-totrec	The total number of MS pre-attachment acknowledgement messages received on the R6 interface.	Int32
r6mspreattack-totacc	The total number of MS pre-attachment acknowledgement messages accepted on the R6 interface.	Int32
r6mspreattack-totrelay	The total number of MS pre-attachment acknowledgement messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a MS pre-attachment acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6mspreattack-totdenied	The total number of MS pre-attachment acknowledgement messages denied on the R6 interface.	Int32
r6mspreattack-totdiscard	The total number of MS pre-attachment acknowledgement messages discarded on the R6 interface.	Int32
r6mspreattack-badform	The total number of badly formed MS pre-attachment acknowledgement messages on the R6 interface.	Int32
r6mspreattack-decodeerr	The total number of MS pre-attachment acknowledgement messages on the R6 interface with decode error.	Int32
r6mspreattack-unspecerr	The total number of MS pre-attachment acknowledgement messages on the R6 interface with unspecified error.	Int32
r6mspreattack-mismandtlv	The total number of MS pre-attachment acknowledgement messages on the R6 interface with missing mandatory TLVs.	Int32
r6mspreattack-tlvvalinval	The total number of MS pre-attachment acknowledgement messages on the R6 interface with invalid TLV value.	Int32

Variables	Description	Data Type
r6mspreattack-unknowntlv	The total number of MS pre-attachment acknowledgement messages on the R6 interface with unknown TLVs.	Int32
r6mspreattack-duptlvfound	The total number of MS pre-attachment acknowledgement messages on the R6 interface with duplicate TLVs.	Int32
r6mspreattack-nosessfound	The total number of MS pre-attachment acknowledgement messages on the R6 interface without any session information.	Int32
r6mspreattack-adminprohib	The total number of MS pre-attachment acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a MS pre-attachment acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6mspreattack-noresourcedrop	The total number of MS pre-attachment acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a MS pre-attachment acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6mspreattack-transiderr	The total number of MS pre-attachment acknowledgement messages on the R6 interface with transaction ID errors.	Int32
r6nwexitmsstachareq-totsent	The total number of network exit MS state change request messages sent on the R6 the interface.	Int32
r6nwexitmsstachareq-retranssent	The total number of network exit MS state change request messages re-transmitted on the R6 interface.	Int32
r6nwexitmsstachareq-totsefail	The total number of failures occurred during transaction ID generation and R6 network exit MS state change request message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6nwexitmsstachareq-totrec	The total number of network exit MS state change request messages received on the R6 interface.	Int32
r6nwexitmsstachareq-totacc	The total number of network exit MS state change request messages accepted on the R6 interface.	Int32
r6nwexitmsstachareq-totrelay	The total number of network exit MS state change request messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a network exit MS state change request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6nwexitmsstachareq-totdenied	The total number of network exit MS state change request messages denied on the R6 interface.	Int32
r6nwexitmsstachareq-totdiscard	The total number of network exit MS state change request messages discarded on the R6 interface.	Int32
r6nwexitmsstachareq-badform	The total number of badly formed network exit MS state change request messages on the R6 interface.	Int32
r6nwexitmsstachareq-decodeerr	The total number of network exit MS state change request messages on the R6 interface with decode error.	Int32

Variables	Description	Data Type
<code>r6nwexitmsstachareq-unspeccerr</code>	The total number of network exit MS state change request messages on the R6 interface with unspecified error.	Int32
<code>r6nwexitmsstachareq-missmandtlv</code>	The total number of network exit MS state change request messages on the R6 interface with missing mandatory TLVs.	Int32
<code>r6nwexitmsstachareq-tlvvalinval</code>	The total number of network exit MS state change request messages on the R6 interface with invalid TLV value.	Int32
<code>r6nwexitmsstachareq-unknownnlv</code>	The total number of network exit MS state change request messages on the R6 interface with unknown TLVs.	Int32
<code>r6nwexitmsstachareq-dupltlvfound</code>	The total number of network exit MS state change request messages on the R6 interface with duplicate TLVs.	Int32
<code>r6nwexitmsstachareq-nosessfound</code>	The total number of network exit MS state change request messages on the R6 interface without any session information.	Int32
<code>r6nwexitmsstachareq-adminprohib</code>	The total number of network exit MS state change request messages on the R6 interface with transaction ID errors.	Int32
<code>r6nwexitmsstachareq-noresourcedrop</code>	The total number of network exit MS state change request messages discarded or denied due to resource unavailability. Triggers: Changes every time a network exit MS state change request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
<code>r6nwexitmsstachareq-transiderr</code>	The total number of network exit MS state change request messages discarded or denied due to transaction ID errors.	Int32
<code>r6nwexitmsstacharsp-totsent</code>	The total number of network exit MS state change response messages sent on the R6 interface.	Int32
<code>r6nwexitmsstacharsp-retranssent</code>	The total number of network exit MS state change response messages re-transmitted on the R6 interface.	Int32
<code>r6nwexitmsstacharsp-totsendfail</code>	The total number of failures occurred during transaction ID generation and R6 network exit MS state change response message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
<code>r6nwexitmsstacharsp-totrec</code>	The total number of network exit MS state change response messages received on the R6 interface.	Int32
<code>r6nwexitmsstacharsp-totacc</code>	The total number of network exit MS state change response messages accepted on the R6 interface.	Int32
<code>r6nwexitmsstacharsp-totrelay</code>	The total number of network exit MS state change response messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a network exit MS state change response message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
<code>r6nwexitmsstacharsp-totdenied</code>	The total number of network exit MS state change response messages denied on the R6 interface.	Int32
<code>r6nwexitmsstacharsp-totdiscard</code>	The total number of network exit MS state change response messages discarded on the R6 interface.	Int32

Variables	Description	Data Type
r6nwexitmsstacharsp-badform	The total number of badly formed network exit MS state change response messages on the R6 interface.	Int32
r6nwexitmsstacharsp-decodeerr	The total number of network exit MS state change response messages on the R6 interface with decode error.	Int32
r6nwexitmsstacharsp-unspecerr	The total number of network exit MS state change response messages on the R6 interface with unspecified error.	Int32
r6nwexitmsstacharsp-missmandtlv	The total number of network exit MS state change response messages on the R6 interface with missing mandatory TLVs.	Int32
r6nwexitmsstacharsp-tlvvalinval	The total number of network exit MS state change response messages on the R6 interface with invalid TLV value.	Int32
r6nwexitmsstacharsp-unknowntrlv	The total number of network exit MS state change response messages on the R6 interface with unknown TLVs.	Int32
r6nwexitmsstacharsp-duptlvfound	The total number of network exit MS state change response messages on the R6 interface with duplicate TLVs.	Int32
r6nwexitmsstacharsp-nosessfound	The total number of network exit MS state change response messages on the R6 interface without any session information.	Int32
r6nwexitmsstacharsp-adminprohib	The total number of network exit MS state change response messages discarded or denied due to admin prohibit. Triggers: Changes every time a network exit MS state change response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6nwexitmsstacharsp-noresourcedrop	The total number of network exit MS state change response messages discarded or denied due to resource unavailability. Triggers: Changes every time a network exit MS state change response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service.	Int32
r6nwexitmsstacharsp-transiderr	The total number of network exit MS state change response messages on the R6 interface with transaction ID errors.	Int32
r6contextreq-totsent	The total number of context request messages sent on the R6 interface.	Int32
r6contextreq-retranssent	The total number of context request messages re-transmitted on the R6 interface.	Int32
r6contextreq-totsendfail	The total number of failures occurred during transaction ID generation and R6 Context Request message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6contextreq-totrec	The total number of context request messages received on the R6 interface.	Int32
r6contextreq-totacc	The total number of context request messages accepted on the R6 interface.	Int32
r6contextreq-totrelay	The total number of context request messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a context request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6contextreq-totdenied	The total number of context request messages denied on the R6 interface.	Int32

Variables	Description	Data Type
r6contextreq-totdiscard	The total number of context request messages discarded on the R6 interface.	Int32
r6contextreq-badform	The total number of badly formed context request messages on the R6 interface.	Int32
r6contextreq-decodeerr	The total number of context request messages on the R6 interface with decode error.	Int32
r6contextreq-unspecerr	The total number of context request messages on the R6 interface with unspecified error.	Int32
r6contextreq-missmandtlv	The total number of context request messages on the R6 interface with missing mandatory TLVs.	Int32
r6contextreq-tlvvalinval	The total number of context request messages on the R6 interface with invalid TLV value.	Int32
r6contextreq-unknownlv	The total number of context request messages on the R6 interface with unknown TLVs.	Int32
r6contextreq-duptlvfound	The total number of context request messages on the R6 interface with duplicate TLVs.	Int32
r6contextreq-nosessfound	The total number of context request messages on the R6 interface without any session information.	Int32
r6contextreq-adminprohib	The total number of context request messages discarded or denied due to admin prohibit. Triggers: Changes every time a context request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6contextreq-noresourcedrop	The total number of context request messages discarded or denied due to resource unavailability. Triggers: Changes every time a context request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service.	Int32
r6contextreq-transiderr	The total number of context request messages on the R6 interface with transaction ID errors.	Int32
r6contextrepo-totsent	The total number of context report messages sent on the R6 interface.	Int32
r6contextrepo-retranssent	The total number of context report messages re-transmitted on the R6 interface.	Int32
r6contextrepo-totsendfail	The total number of failures occurred during transaction ID generation and R6 Context Report message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6contextrepo-totrec	The total number of context report messages received on the R6 interface.	Int32
r6contextrepo-totacc	The total number of context report messages accepted on the R6 interface.	Int32
r6contextrepo-totrelay	The total number of context report messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a context report message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6contextrepo-totdenied	The total number of context report messages denied on the R6 interface.	Int32
r6contextrepo-totdiscard	The total number of context report messages discarded on the R6 interface.	Int32
r6contextrepo-badform	The total number of badly formed context report messages on the R6 interface.	Int32
r6contextrepo-decodeerr	The total number of context report messages on the R6 interface with decode error.	Int32

Variables	Description	Data Type
r6contextrepo-unspecerr	The total number of context report messages on the R6 interface with unspecified error.	Int32
r6contextrepo-missmandtlv	The total number of context report messages on the R6 interface with missing mandatory TLVs.	Int32
r6contextrepo-tlvvalinval	The total number of context report messages on the R6 interface with invalid TLV value.	Int32
r6contextrepo-unknownltlv	The total number of context report messages on the R6 interface with unknown TLVs.	Int32
r6contextrepo-duptlvfound	The total number of context report messages on the R6 interface with duplicate TLVs.	Int32
r6contextrepo-nosessfound	The total number of context report messages on the R6 interface without any session information.	Int32
r6contextrepo-adminprohib	The total number of context report messages discarded or denied due to admin prohibit. Triggers: Changes every time a context report message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6contextrepo-noresourcedrop	The total number of context report messages discarded or denied due to resource unavailability. Triggers: Changes every time a context report message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6contextrepo-transiderr	The total number of context report messages on the R6 interface with transaction ID errors.	Int32
r6contextack-totsent	The total number of context acknowledgement messages sent on the R6 interface.	Int32
r6contextack-retranssent	The total number of context acknowledgement messages re-transmitted on the R6 interface.	Int32
r6contextack-totsendfail	The total number of failures occurred during transaction ID generation and R6 Context acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6contextack-totrec	The total number of context acknowledgement messages received on the R6 interface.	Int32
r6contextack-totacc	The total number of context acknowledgement messages accepted on the R6 interface.	Int32
r6contextack-totrelay	The total number of context acknowledgement messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a context acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6contextack-totdenied	The total number of context acknowledgement messages denied on the R6 interface.	Int32
r6contextack-totdiscard	The total number of context acknowledgement messages discarded on the R6 interface.	Int32
r6contextack-badform	The total number of badly formed context acknowledgement messages on the R6 interface.	Int32
r6contextack-decodeerr	The total number of context acknowledgement messages on the R6 interface with decode error.	Int32

Variables	Description	Data Type
r6contextack-unspecerr	The total number of context acknowledgement messages on the R6 interface with unspecified error.	Int32
r6contextack-missmandtlv	The total number of context acknowledgement messages on the R6 interface with missing mandatory TLVs.	Int32
r6contextack-tlvvalinval	The total number of context acknowledgement messages on the R6 interface with invalid TLV value.	Int32
r6contextack-unknowntrlv	The total number of context acknowledgement messages on the R6 interface with unknown TLVs.	Int32
r6contextack-duptlvfound	The total number of context acknowledgement messages on the R6 interface with duplicate TLVs.	Int32
r6contextack-nosessfound	The total number of context acknowledgement messages on the R6 interface without any session information.	Int32
r6contextack-adminprohib	The total number of context acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a context acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6contextack-noresourcedrop	The total number of context acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a context acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6contextack-transiderr	The total number of context acknowledgement messages on the R6 interface with transaction ID errors.	Int32
r6autheaptra-totsent	The total number of authentication EAP transfer messages sent on the R6 interface.	Int32
r6autheaptra-retranssent	The total number of authentication EAP transfer messages re-transmitted on the R6 interface.	Int32
r6autheaptra-totsendfail	The total number of failures occurred during transaction ID generation and R6 EAP transfer message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6autheaptra-totrec	The total number of authentication EAP transfer messages received on the R6 interface.	Int32
r6autheaptra-totacc	The total number of authentication EAP transfer messages accepted on the R6 interface.	Int32
r6autheaptra-totrelay	The total number of authentication EAP transfer messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an authentication EAP transfer message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6autheaptra-totdenied	The total number of authentication EAP transfer messages denied on the R6 interface.	Int32
r6autheaptra-totdiscard	The total number of authentication EAP transfer messages discarded on the R6 interface.	Int32
r6autheaptra-badform	The total number of badly formed authentication EAP transfer messages on the R6 interface.	Int32

Variables	Description	Data Type
r6autheaptra-decodeerr	The total number of authentication EAP transfer messages on the R6 interface with decode error.	Int32
r6autheaptra-unspecerr	The total number of authentication EAP transfer messages on the R6 interface with unspecified error.	Int32
r6autheaptra-missmandtlv	The total number of authentication EAP transfer messages on the R6 interface with missing mandatory TLVs.	Int32
r6autheaptra-tlvvalinval	The total number of authentication EAP transfer messages on the R6 interface with invalid TLV value.	Int32
r6autheaptra-unknowntrlv	The total number of authentication EAP transfer messages on the R6 interface with unknown TLVs.	Int32
r6autheaptra-duptlvfound	The total number of authentication EAP transfer messages on the R6 interface with duplicate TLVs.	Int32
r6autheaptra-nosessfound	The total number of authentication EAP transfer messages on the R6 interface without any session information.	Int32
r6autheaptra-adminprohib	The total number of authentication EAP transfer messages discarded or denied due to admin prohibit. Triggers: Changes every time an authentication EAP transfer message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6autheaptra-noresourcedrop	The total number of authentication EAP transfer messages discarded or denied due to resource unavailability. Triggers: Changes every time an authentication EAP transfer message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6autheaptra-transiderr	The total number of authentication EAP transfer messages on the R6 interface with transaction ID errors.	Int32
r6autheapsta-totrec	The total number of authentication EAP start messages sent on the R6 interface.	Int32
r6autheapsta-totacc	The total number of authentication EAP start messages accepted on the R6 interface.	Int32
r6autheapsta-totrelay	The total number of authentication EAP start messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an authentication EAP start message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6autheapsta-totdenied	The total number of authentication EAP start messages denied on the R6 interface.	Int32
r6autheapsta-totdiscard	The total number of authentication EAP start messages discarded on the R6 interface.	Int32
r6autheapsta-badform	The total number of badly formed authentication EAP start messages on the R6 interface.	Int32
r6autheapsta-decodeerr	The total number of authentication EAP start messages on the R6 interface with decode error.	Int32
r6autheapsta-unspecerr	The total number of authentication EAP start messages on the R6 interface with unspecified error.	Int32

Variables	Description	Data Type
r6autheapsta-mismandtlv	The total number of authentication EAP start messages on the R6 interface with missing mandatory TLVs.	Int32
r6autheapsta-tlvvalinval	The total number of authentication EAP start messages on the R6 interface with invalid TLV value.	Int32
r6autheapsta-unknowntrlv	The total number of authentication EAP start messages on the R6 interface with unknown TLVs.	Int32
r6autheapsta-duptlvfound	The total number of authentication EAP start messages on the R6 interface with duplicate TLVs.	Int32
r6autheapsta-nosessfound	The total number of authentication EAP start messages on the R6 interface without any session information.	Int32
r6autheapsta-adminprohib	The total number of authentication EAP start messages discarded or denied due to admin prohibit. Triggers: Changes every time an authentication EAP start message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6autheapsta-noresourcedrop	The total number of authentication EAP start messages discarded or denied due to resource unavailability. Triggers: Changes every time an authentication EAP start message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6autheapsta-transiderr	The total number of authentication EAP start messages on the R6 interface with transaction ID errors.	Int32
r6msattreq-totsent	The total number of MS attachment request messages sent on the R6 interface.	Int32
r6msattreq-retranssent	The total number of MS attachment request messages re-transmitted on the R6 interface.	Int32
r6msattreq-totsendfail	The total number of failures occurred during transaction ID generation and R6 MS Attachment Request message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6msattreq-totrec	The total number of MS attachment request messages received on the R6 interface.	Int32
r6msattreq-totacc	The total number of MS attachment request messages accepted on the R6 interface.	Int32
r6msattreq-totrelay	The total number of MS attachment request messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an MS attachment request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6msattreq-totdenied	The total number of MS attachment request messages denied on the R6 interface.	Int32
r6msattreq-totdiscard	The total number of MS attachment request messages discarded on the R6 interface.	Int32
r6msattreq-badform	The total number of badly formed MS attachment request messages on the R6 interface.	Int32
r6msattreq-decodeerr	The total number of MS attachment request messages on the R6 interface with decode error.	Int32

Variables	Description	Data Type
r6msattreq-unspecerr	The total number of MS attachment request messages on the R6 interface with unspecified error.	Int32
r6msattreq-misssmandtlv	The total number of MS attachment request messages on the R6 interface with missing mandatory TLVs.	Int32
r6msattreq-tlvvalinval	The total number of MS attachment request messages on the R6 interface with invalid TLV value.	Int32
r6msattreq-unknowntrlv	The total number of MS attachment request messages on the R6 interface with unknown TLVs.	Int32
r6msattreq-duptlvfound	The total number of MS attachment request messages on the R6 interface with duplicate TLVs.	Int32
r6msattreq-nosessfound	The total number of MS attachment request messages on the R6 interface without any session information.	Int32
r6msattreq-adminprohib	The total number of MS attachment request messages discarded or denied due to admin prohibit. Triggers: Changes every time an MS attachment request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6msattreq-noresourcedrop	The total number of MS attachment request messages discarded or denied due to resource unavailability. Triggers: Changes every time an MS attachment request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6msattreq-transiderr	The total number of MS attachment request messages on the R6 interface with transaction ID errors.	Int32
r6msattrsp-totsent	The total number of MS attachment response messages sent on the R6 interface.	Int32
r6msattrsp-retranssent	The total number of MS attachment response messages re-transmitted on the R6 interface.	Int32
r6msattrsp-totsefail	The total number of failures occurred during transaction ID generation and R6 MS Attachment Response message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6msattrsp-totrec	The total number of MS attachment response messages received on the R6 interface.	Int32
r6msattrsp-totacc	The total number of MS attachment response messages accepted on the R6 interface.	Int32
r6msattrsp-totrelay	The total number of MS attachment response messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an MS attachment response message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6msattrsp-totdenied	The total number of MS attachment response messages denied on the R6 interface.	Int32
r6msattrsp-totdiscard	The total number of MS attachment response messages discarded on the R6 interface.	Int32
r6msattrsp-badform	The total number of badly formed MS attachment response messages on the R6 interface.	Int32

Variables	Description	Data Type
r6msattrsp-decodeerr	The total number of MS attachment response messages on the R6 interface with decode error.	Int32
r6msattrsp-unspecerr	The total number of MS attachment response messages on the R6 interface with unspecified error.	Int32
r6msattrsp-missmandtlv	The total number of MS attachment response messages on the R6 interface with missing mandatory TLVs.	Int32
r6msattrsp-tlvvalinval	The total number of MS attachment response messages on the R6 interface with invalid TLV value.	Int32
r6msattrsp-unknownctlv	The total number of MS attachment response messages on the R6 interface with unknown TLVs.	Int32
r6msattrsp-dupctlvfound	The total number of MS attachment response messages on the R6 interface with duplicate TLVs.	Int32
r6msattrsp-nosessfound	The total number of MS attachment response messages on the R6 interface without any session information.	Int32
r6msattrsp-adminprohib	The total number of MS attachment response messages discarded or denied due to admin prohibit. Triggers: Changes every time an MS attachment response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6msattrsp-noresourcedrop	The total number of MS attachment response messages discarded or denied due to resource unavailability. Triggers: Changes every time an MS attachment response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6msattrsp-transiderr	The total number of MS attachment response messages on the R6 interface with transaction ID errors.	Int32
r6msattack-totsent	The total number of MS attachment acknowledgement messages sent on the R6 interface.	Int32
r6msattack-retranssent	The total number of MS attachment acknowledgement messages re-transmitted on the R6 interface.	Int32
r6msattack-totsefail	The total number of failures occurred during transaction ID generation and R6 MS attachment acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6msattack-totrec	The total number of MS attachment acknowledgement messages received on the R6 interface.	Int32
r6msattack-totacc	The total number of MS attachment acknowledgement messages accepted on the R6 interface.	Int32
r6msattack-totrelay	The total number of MS attachment acknowledgement messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an MS attachment acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r6msattack-totdenied	The total number of MS attachment acknowledgement messages denied on the R6 interface.	Int32
r6msattack-totdiscard	The total number of MS attachment acknowledgement messages discarded on the R6 interface.	Int32
r6msattack-badform	The total number of badly formed MS attachment acknowledgement messages on the R6 interface.	Int32
r6msattack-decodeerr	The total number of MS attachment acknowledgement messages on the R6 interface with decode error.	Int32
r6msattack-unspecerr	The total number of MS attachment acknowledgement messages on the R6 interface with unspecified error.	Int32
r6msattack-missmandtlv	The total number of MS attachment acknowledgement messages on the R6 interface with missing mandatory TLVs.	Int32
r6msattack-tlvvalinval	The total number of MS attachment acknowledgement messages on the R6 interface with invalid TLV value.	Int32
r6msattack-unknowntrlv	The total number of MS attachment acknowledgement messages on the R6 interface with unknown TLVs.	Int32
r6msattack-duptlvfound	The total number of MS attachment acknowledgement messages on the R6 interface with duplicate TLVs.	Int32
r6msattack-noesssfound	The total number of MS attachment acknowledgement messages on the R6 interface without any session information.	Int32
r6msattack-adminprohib	The total number of MS attachment acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time an MS attachment acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6msattack-noresourcedrop	The total number of MS attachment acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time an MS attachment acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6msattack-transiderr	The total number of MS attachment acknowledgement messages on the R6 interface with transaction ID errors.	Int32
r6datapathpreregreq-totsent	The total number of data path pre-registration request messages sent on the R6 interface.	Int32
r6datapathpreregreq-retranssent	The total number of data path pre-registration request messages re-transmitted on the R6 interface.	Int32
r6datapathpreregreq-totsendfail	The total number of failures occurred during transaction ID generation and R6 data path pre-registration request message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6datapathpreregreq-totrec	The total number of data path pre-registration request messages received on the R6 interface.	Int32

Variables	Description	Data Type
r6datapathpreregreq-totacc	The total number of data path pre-registration request messages accepted on the R6 interface.	Int32
r6datapathpreregreq-totrelay	The total number of data path pre-registration request messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a data path pre-registration request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6datapathpreregreq-totdenied	The total number of data path pre-registration request messages denied on the R6 interface.	Int32
r6datapathpreregreq-totdiscard	The total number of data path pre-registration request messages discarded on the R6 interface.	Int32
r6datapathpreregreq-badform	The total number of badly formed data path pre-registration request messages on the R6 interface.	Int32
r6datapathpreregreq-decodeerr	The total number of data path pre-registration request messages on the R6 interface with decode error.	Int32
r6datapathpreregreq-unspecerr	The total number of data path pre-registration request messages on the R6 interface with unspecified error.	Int32
r6datapathpreregreq-missmandtlv	The total number of data path pre-registration request messages on the R6 interface with missing mandatory TLVs.	Int32
r6datapathpreregreq-tlvvalinval	The total number of data path pre-registration request messages on the R6 interface with invalid TLV value.	Int32
r6datapathpreregreq-unknowntrlv	The total number of data path pre-registration request messages on the R6 interface with unknown TLVs.	Int32
r6datapathpreregreq-duptlvfound	The total number of data path pre-registration request messages on the R6 interface with duplicate TLVs.	Int32
r6datapathpreregreq-nosessfound	The total number of data path pre-registration request messages on the R6 interface without any session information.	Int32
r6datapathpreregreq-adminprohib	The total number of data path pre-registration request messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path pre-registration request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6datapathpreregreq-noresourcedrop	The total number of data path pre-registration request messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path pre-registration request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6datapathpreregreq-transiderr	The total number of data path pre-registration request messages on the R6 interface with transaction ID errors.	Int32
r6datapathpreregresp-totsent	The total number of data path pre-registration response messages sent on the R6 interface.	Int32

Variables	Description	Data Type
r6datapathpreregrsp-retranssent	The total number of data path pre-registration response messages re-transmitted on the R6 interface.	Int32
r6datapathpreregrsp-totsendfail	The total number of failures occurred during transaction ID generation and R6 data path pre-registration response message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6datapathpreregrsp-totrec	The total number of data path pre-registration response messages received on the R6 interface.	Int32
r6datapathpreregrsp-totacc	The total number of data path pre-registration response messages accepted on the R6 interface.	Int32
r6datapathpreregrsp-totrelay	The total number of data path pre-registration response messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a data path pre-registration response message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6datapathpreregrsp-totdenied	The total number of data path pre-registration response messages denied on the R6 interface.	Int32
r6datapathpreregrsp-totdiscard	The total number of data path pre-registration response messages discarded on the R6 interface.	Int32
r6datapathpreregrsp-badform	The total number of badly formed data path pre-registration response messages on the R6 interface.	Int32
r6datapathpreregrsp-decodeerr	The total number of data path pre-registration response messages on the R6 interface with decode error.	Int32
r6datapathpreregrsp-unspecerr	The total number of data path pre-registration response messages on the R6 interface with unspecified error.	Int32
r6datapathpreregrsp-missmandtlv	The total number of data path pre-registration response messages on the R6 interface with missing mandatory TLVs.	Int32
r6datapathpreregrsp-tlvvalinval	The total number of data path pre-registration response messages on the R6 interface with invalid TLV value.	Int32
r6datapathpreregrsp-unknowntrlv	The total number of data path pre-registration response messages on the R6 interface with unknown TLVs.	Int32
r6datapathpreregrsp-duptrlvfound	The total number of data path pre-registration response messages on the R6 interface with duplicate TLVs.	Int32
r6datapathpreregrsp-nosessfound	The total number of data path pre-registration response messages on the R6 interface without any session information.	Int32
r6datapathpreregrsp-adminprohib	The total number of data path pre-registration response messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path pre-registration response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r6datapathpreregsp-noreourcedrop	The total number of data path pre-registration response messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path pre-registration response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6datapathpreregsp-transiderr	The total number of data path pre-registration response messages on the R6 interface with transaction ID errors.	Int32
r6datapathpreregack-totsent	The total number of data path pre-registration acknowledgement messages sent on the R6 interface.	Int32
r6datapathpreregack-retranssent	The total number of data path pre-registration acknowledgement messages re-transmitted on the R6 interface.	Int32
r6datapathpreregack-totsendfail	The total number of failures occurred during transaction ID generation and R6 data path pre-registration acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6datapathpreregack-totrec	The total number of data path pre-registration acknowledgement messages received on the R6 interface.	Int32
r6datapathpreregack-totacc	The total number of data path pre-registration acknowledgement messages accepted on the R6 interface.	Int32
r6datapathpreregack-totrelay	The total number of data path pre-registration acknowledgement messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a data path pre-registration acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6datapathpreregack-totdenied	The total number of data path pre-registration acknowledgement messages denied on the R6 interface.	Int32
r6datapathpreregack-totdiscard	The total number of data path pre-registration acknowledgement messages discarded on the R6 interface.	Int32
r6datapathpreregack-badform	The total number of badly formed data path pre-registration acknowledgement messages on the R6 interface.	Int32
r6datapathpreregack-decodeerr	The total number of data path pre-registration acknowledgement messages on the R6 interface with decode error.	Int32
r6datapathpreregack-unspecerr	The total number of data path pre-registration acknowledgement messages on the R6 interface with unspecified error.	Int32
r6datapathpreregack-missmandtlv	The total number of data path pre-registration acknowledgement messages on the R6 interface with missing mandatory TLVs.	Int32
r6datapathpreregack-tlvvalinval	The total number of data path pre-registration acknowledgement messages on the R6 interface with invalid TLV value.	Int32
r6datapathpreregack-unknowntrlv	The total number of data path pre-registration acknowledgement messages on the R6 interface with unknown TLVs.	Int32
r6datapathpreregack-duptlvfound	The total number of data path pre-registration acknowledgement messages on the R6 interface with duplicate TLVs.	Int32

Variables	Description	Data Type
r6datapathpreregack-nosessfound	The total number of data path pre-registration acknowledgement messages on the R6 interface without any session information.	Int32
r6datapathpreregack-adminprohib	The total number of data path pre-registration acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path pre-registration acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6datapathpreregack-noresourcedrop	The total number of data path pre-registration acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path pre-registration acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6datapathpreregack-transiderr	The total number of data path pre-registration acknowledgement messages on the R6 interface with transaction ID errors.	Int32
r6datapathregreq-totsent	The total number of data path registration request messages sent on the R6 interface.	Int32
r6datapathregreq-retranssent	The total number of data path registration request messages re-transmitted on the R6 interface.	Int32
r6datapathregreq-totsendfail	The total number of failures occurred during transaction ID generation and R6 data path registration request message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6datapathregreq-totrec	The total number of data path registration request messages received on the R6 interface.	Int32
r6datapathregreq-totacce	The total number of data path registration request messages accepted on the R6 interface.	Int32
r6datapathregreq-totrelay	The total number of data path registration request messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a data path registration request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6datapathregreq-totdenied	The total number of data path registration request messages denied on the R6 interface.	Int32
r6datapathregreq-totdiscard	The total number of data path registration request messages discarded on the R6 interface.	Int32
r6datapathregreq-badform	The total number of badly formed data path registration request messages on the R6 interface.	Int32
r6datapathregreq-decodeerr	The total number of data path registration request messages on the R6 interface with decode error.	Int32
r6datapathregreq-unspecerr	The total number of data path registration request messages on the R6 interface with unspecified error.	Int32
r6datapathregreq-missmandtlv	The total number of data path registration request messages on the R6 interface with missing mandatory TLVs.	Int32
r6datapathregreq-tlvvalinval	The total number of data path registration request messages on the R6 interface with invalid TLV value.	Int32

Variables	Description	Data Type
r6datapathregreq-unknowntlv	The total number of data path registration request messages on the R6 interface with unknown TLVs.	Int32
r6datapathregreq-dupltlvfound	The total number of data path registration request messages on the R6 interface with duplicate TLVs.	Int32
r6datapathregreq-nosessfound	The total number of data path registration request messages on the R6 interface without any session information.	Int32
r6datapathregreq-adminprohib	The total number of data path registration request messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path registration request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6datapathregreq-noresourcedrop	The total number of data path registration request messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path registration request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6datapathregreq-transiderr	The total number of data path registration request messages on the R6 interface with transaction ID errors.	Int32
r6datapathregrsp-totsent	The total number of data path registration response messages sent on the R6 interface.	Int32
r6datapathregrsp-retranssent	The total number of data path registration response messages re-transmitted on the R6 interface.	Int32
r6datapathregrsp-totsendfail	The total number of failures occurred during transaction ID generation and R6 data path registration response message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6datapathregrsp-totrec	The total number of data path registration response messages received on the R6 interface.	Int32
r6datapathregrsp-totacc	The total number of data path registration response messages accepted on the R6 interface.	Int32
r6datapathregrsp-totrelay	The total number of data path registration response messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a data path registration response message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6datapathregrsp-totdenied	The total number of data path registration response messages denied on the R6 interface.	Int32
r6datapathregrsp-totdiscard	The total number of data path registration response messages discarded on the R6 interface.	Int32
r6datapathregrsp-badform	The total number of badly formed data path registration response messages on the R6 interface.	Int32
r6datapathregrsp-decodeerr	The total number of data path registration response messages on the R6 interface with decode error.	Int32
r6datapathregrsp-unspecerr	The total number of data path registration response messages on the R6 interface with unspecified error.	Int32

Variables	Description	Data Type
r6datapathregrsp-missmandtlv	The total number of data path registration response messages on the R6 interface with missing mandatory TLVs.	Int32
r6datapathregrsp-tlvvalinval	The total number of data path registration response messages on the R6 interface with invalid TLV value.	Int32
r6datapathregrsp-unknowntlv	The total number of data path registration response messages on the R6 interface with unknown TLVs.	Int32
r6datapathregrsp-duptlvfound	The total number of data path registration response messages on the R6 interface with duplicate TLVs.	Int32
r6datapathregrsp-nosessfound	The total number of data path registration response messages on the R6 interface without any session information.	Int32
r6datapathregrsp-adminprohib	The total number of data path registration response messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path registration response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6datapathregrsp-noresourcedrop	The total number of data path registration response messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path registration response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6datapathregrsp-transider	The total number of data path registration response messages on the R6 interface with transaction ID errors.	Int32
r6datapathregack-totsent	The total number of data path registration acknowledgement messages sent on the R6 interface.	Int32
r6datapathregack-retranssent	The total number of data path registration acknowledgement messages re-transmitted on the R6 interface.	Int32
r6datapathregack-totsendfail	The total number of failures occurred during transaction ID generation and R6 data path registration acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6datapathregack-totrec	The total number of data path registration acknowledgement messages received on the R6 interface.	Int32
r6datapathregack-totacc	The total number of data path registration acknowledgement messages accepted on the R6 interface.	Int32
r6datapathregack-totrelay	The total number of data path registration acknowledgement messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a data path registration acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6datapathregack-totdenied	The total number of data path registration acknowledgement messages denied on the R6 interface.	Int32
r6datapathregack-totdiscard	The total number of data path registration acknowledgement messages discarded on the R6 interface.	Int32

Variables	Description	Data Type
r6datapathregack-badform	The total number of badly formed data path registration acknowledgement messages on the R6 interface.	Int32
r6datapathregack-decodeerr	The total number of data path registration acknowledgement messages on the R6 interface with decode error.	Int32
r6datapathregack-unspecerr	The total number of data path registration acknowledgement messages on the R6 interface with unspecified error.	Int32
r6datapathregack-missmandtlv	The total number of data path registration acknowledgement messages on the R6 interface with missing mandatory TLVs.	Int32
r6datapathregack-tlvvalinval	The total number of data path registration acknowledgement messages on the R6 interface with invalid TLV value.	Int32
r6datapathregack-unknownnlv	The total number of data path registration acknowledgement messages on the R6 interface with unknown TLVs.	Int32
r6datapathregack-dupltlvfound	The total number of data path registration acknowledgement messages on the R6 interface with duplicate TLVs.	Int32
r6datapathregack-nosessfound	The total number of data path registration acknowledgement messages on the R6 interface without any session information.	Int32
r6datapathregack-adminprohib	The total number of data path registration acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path registration acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6datapathregack-noresourcedrop	The total number of data path registration acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path registration acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6datapathregack-transiderr	The total number of data path registration acknowledgement messages on the R6 interface with transaction ID errors.	Int32
r6pathmodreq-totsent	The total number of data path modification request messages sent on the R6 interface.	Int32
r6pathmodreq-retranssent	The total number of retransmitted data path modification request messages sent on the R6 interface.	Int32
r6pathmodreq-totsendfail	The total number of failed data path modification request messages sent on the R6 interface.	Int32
r6pathmodreq-totrec	The total number of data path modification request messages received on the R6 interface.	Int32
r6pathmodreq-totacc	The total number of accepted data path modification request messages sent on the R6 interface.	Int32
r6pathmodreq-totrelay	The total number of data path modification request messages relayed on the R6 interface.	Int32
r6pathmodreq-totdenied	The total number of denied data path modification request messages sent on the R6 interface.	Int32

Variables	Description	Data Type
r6pathmodreq-totdiscard	The total number of discarded data path modification request messages sent on the R6 interface.	Int32
r6pathmodreq-badform	The total number of data path modification request messages with a bad format sent on the R6 interface.	Int32
r6pathmodreq-decodeerr	The total number of data path modification request messages with decode errors sent on the R6 interface.	Int32
r6pathmodreq-unspecerr	The total number of data path modification request messages with unspecified errors sent on the R6 interface.	Int32
r6pathmodreq-missmandtlv	The total number of data path modification request messages sent on the R6 interface with a missing mandatory TLV.	Int32
r6pathmodreq-tlvvalinval	The total number of data path modification request messages sent on the R6 interface with an invalid TLV.	Int32
r6pathmodreq-unknowntlv	The total number of data path modification request messages sent on the R6 interface with an unknown TLV.	Int32
r6pathmodreq-duptlvfound	The total number of data path modification request messages sent on the R6 interface found with a duplicate TLV.	Int32
r6pathmodreq-nosessfound	The total number of data path modification request messages sent on the R6 interface with no session found.	Int32
r6pathmodreq-adminprohib	The total number of data path modification request messages sent on the R6 interface with administration prohibited.	Int32
r6pathmodreq-noresourcedrop	The total number of data path modification request messages discarded or denied due to resource unavailability.	Int32
r6pathmodreq-transiderr	The total number of data path modification request messages sent on the R6 interface with transaction ID errors.	Int32
r6pathmodrsp-totsent	The total number of data path modification response messages sent on the R6 interface.	Int32
r6pathmodrsp-retranssent	The total number of retransmitted data path modification response messages sent on the R6 interface.	Int32
r6pathmodrsp-totsendfail	The total number of failed data path modification response messages sent on the R6 interface.	Int32
r6pathmodrsp-totrec	The total number of data path modification response messages received on the R6 interface.	Int32
r6pathmodrsp-totacc	The total number of accepted data path modification response messages sent on the R6 interface.	Int32
r6pathmodrsp-totrelay	The total number of data path modification response messages relayed on the R6 interface.	Int32
r6pathmodrsp-totdenied	The total number of denied data path modification response messages sent on the R6 interface.	Int32
r6pathmodrsp-totdiscard	The total number of discarded data path modification response messages sent on the R6 interface.	Int32

Variables	Description	Data Type
r6pathmodrsp-badform	The total number of data path modification response messages with a bad format sent on the R6 interface.	Int32
r6pathmodrsp-decodeerr	The total number of data path modification response messages with decode errors sent on the R6 interface.	Int32
r6pathmodrsp-unspecerr	The total number of data path modification response messages with unspecified errors sent on the R6 interface.	Int32
r6pathmodrsp-missmandtlv	The total number of data path modification response messages sent on the R6 interface with a missing mandatory TLV.	Int32
r6pathmodrsp-tlvvalinval	The total number of data path modification response messages sent on the R6 interface with an invalid TLV.	Int32
r6pathmodrsp-unknownctlv	The total number of data path modification response messages sent on the R6 interface with an unknown TLV.	Int32
r6pathmodrsp-duptlv found	The total number of data path modification response messages sent on the R6 interface found with a duplicate TLV.	Int32
r6pathmodrsp-nosessfound	The total number of data path modification response messages sent on the R6 interface with no session found.	Int32
r6pathmodrsp-adminprohib	The total number of data path modification response messages sent on the R6 interface with administration prohibited.	Int32
r6pathmodrsp-noresourcedrop	The total number of data path modification response messages sent on the R6 interface discarded or denied due to resource unavailability.	Int32
r6pathmodrsp-transiderr	The total number of data path modification response messages sent on the R6 interface with transaction ID errors.	Int32
r6pathmodack-totsent	The total number of data path modification acknowledgement messages sent on the R6 interface.	Int32
r6pathmodack-retranssent	The total number of retransmitted data path modification acknowledgement messages sent on the R6 interface.	Int32
r6pathmodack-totsendfail	The total number of failed data path modification acknowledgement messages sent on the R6 interface.	Int32
r6pathmodack-totrec	The total number of data path modification acknowledgement messages received on the R6 interface.	Int32
r6pathmodack-totacc	The total number of data path modification acknowledgement messages received on the R6 interface.	Int32
r6pathmodack-totrelay	The total number of data path modification acknowledgement messages relayed on the R6 interface.	Int32
r6pathmodack-totdenied	The total number of denied data path modification acknowledgement messages sent on the R6 interface.	Int32
r6pathmodack-totdiscard	The total number of discarded data path modification acknowledgement messages sent on the R6 interface.	Int32

Variables	Description	Data Type
r6pathmodack-badform	The total number of data path modification acknowledgement messages with a bad format sent on the R6 interface.	Int32
r6pathmodack-decodeerr	The total number of data path modification acknowledgement messages with decode errors sent on the R6 interface.	Int32
r6pathmodack-unspecerr	The total number of data path modification acknowledgement messages with unspecified errors sent on the R6 interface.	Int32
r6pathmodack-missmandtlv	The total number of data path modification acknowledgement messages sent on the R6 interface with a missing mandatory TLV.	Int32
r6pathmodack-tlvvalinval	The total number of data path modification acknowledgement messages sent on the R6 interface with an invalid TLV.	Int32
r6pathmodack-unknowntlv	The total number of data path modification acknowledgement messages sent on the R6 interface with an unknown TLV.	Int32
r6pathmodack-duptlvfound	The total number of data path modification acknowledgement messages sent on the R6 interface found with a duplicate TLV.	Int32
r6pathmodack-nosessfound	The total number of data path modification acknowledgement messages sent on the R6 interface with no session found.	Int32
r6pathmodack-adminprohib	The total number of data path modification acknowledgement messages sent on the R6 interface with administration prohibited.	Int32
r6pathmodack-noresourcedrop	The total number of data path modification acknowledgement messages sent on the R6 discarded or denied due to resource unavailability.	Int32
r6pathmodack-transiderr	The total number of data path modification acknowledgement messages sent on the R6 interface with transaction ID errors.	Int32
r6datapathderegreq-totsent	The total number of data path de-registration request messages sent on the R6 interface.	Int32
r6datapathderegreq-retranssent	The total number of data path de-registration request messages re-transmitted on the R6 interface.	Int32
r6datapathderegreq-totsendfail	The total number of failures occurred during transaction ID generation and R6 data path de-registration request message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6datapathderegreq-totrec	The total number of data path de-registration request messages received on the R6 interface.	Int32
r6datapathderegreq-totacc	The total number of data path de-registration request messages accepted on the R6 interface.	Int32
r6datapathderegreq-totrelay	The total number of data path de-registration request messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a data path de-registration request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6datapathderegreq-totdenied	The total number of data path de-registration request messages denied on the R6 interface.	Int32

Variables	Description	Data Type
r6datapathderegreq-totdiscard	The total number of data path de-registration request messages discarded on the R6 interface.	Int32
r6datapathderegreq-badform	The total number of badly formed data path de-registration request messages on the R6 interface.	Int32
r6datapathderegreq-decodeerr	The total number of data path de-registration request messages on the R6 interface with decode error.	Int32
r6datapathderegreq-unspecerr	The total number of data path de-registration request messages on the R6 interface with unspecified error.	Int32
r6datapathderegreq-missmandtlv	The total number of data path de-registration request messages on the R6 interface with missing mandatory TLVs.	Int32
r6datapathderegreq-tlvvalinval	The total number of data path de-registration request messages on the R6 interface with invalid TLV value.	Int32
r6datapathderegreq-unknowntrlv	The total number of data path de-registration request messages on the R6 interface with unknown TLVs.	Int32
r6datapathderegreq-duptrlvfound	The total number of data path de-registration request messages on the R6 interface with duplicate TLVs.	Int32
r6datapathderegreq-nosessfound	The total number of data path de-registration request messages on the R6 interface without any session information.	Int32
r6datapathderegreq-adminprohib	The total number of data path de-registration request messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path de-registration request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6datapathderegreq-noresourcedrop	The total number of data path de-registration request messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path de-registration request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.services.	Int32
r6datapathderegreq-transiderr	The total number of data path de-registration request messages on the R6 interface with transaction ID errors.	Int32
r6datapathderegresp-totsent	The total number of data path de-registration response messages sent on the R6 interface.	Int32
r6datapathderegresp-retranssent	The total number of data path de-registration response messages re-transmitted on the R6 interface.	Int32
r6datapathderegresp-totsendfail	The total number of failures occurred during transaction ID generation and R6 data path de-registration response message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6datapathderegresp-totrec	The total number of data path de-registration response messages received on the R6 interface.	Int32
r6datapathderegresp-totacc	The total number of data path de-registration response messages accepted on the R6 interface.	Int32

Variables	Description	Data Type
r6datapathderegsp-totrelay	The total number of data path de-registration response messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a data path de-registration response message is relayed by the R6 interface. Availability: across all ASNGW services.services.	Int32
r6datapathderegsp-totdenied	The total number of data path de-registration response messages denied on the R6 interface.	Int32
r6datapathderegsp-totdiscard	The total number of data path de-registration response messages discarded on the R6 interface.	Int32
r6datapathderegsp-badform	The total number of badly formed data path de-registration response messages on the R6 interface.	Int32
r6datapathderegsp-decodeerr	The total number of data path de-registration response messages on the R6 interface with decode error.	Int32
r6datapathderegsp-unspecerr	The total number of data path de-registration response messages on the R6 interface with unspecified error.	Int32
r6datapathderegsp-missmandtlv	The total number of data path de-registration response messages on the R6 interface with missing mandatory TLVs.	Int32
r6datapathderegsp-tlvvalinval	The total number of data path de-registration response messages on the R6 interface with invalid TLV value.	Int32
r6datapathderegsp-unknowntrlv	The total number of data path de-registration response messages on the R6 interface with unknown TLVs.	Int32
r6datapathderegsp-duptrlvfound	The total number of data path de-registration response messages on the R6 interface with duplicate TLVs.	Int32
r6datapathderegsp-nosessfound	The total number of data path de-registration response messages on the R6 interface without any session information.	Int32
r6datapathderegsp-adminprohib	The total number of data path de-registration response messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path de-registration response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6datapathderegsp-noresourcedrop	The total number of data path de-registration response messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path de-registration response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6datapathderegsp-transiderr	The total number of data path de-registration response messages on the R6 interface with transaction ID errors.	Int32
r6keychadir-totsent	The total number of key change direct messages sent on the R6 interface.	Int32
r6keychadir-retranssent	The total number of failures occurred during transaction ID generation and R6 Key change directive message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32

Variables	Description	Data Type
r6keychadir-totsendfail	The total number of key change direct messages re-transmitted on the R6 interface.	Int32
r6keychadir-totrec	The total number of key change direct messages received on the R6 interface.	Int32
r6keychadir-totacc	The total number of key change direct messages accepted on the R6 interface.	Int32
r6keychadir-totrelay	The total number of key change directive messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a key change directive message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6keychadir-totdenied	The total number of key change direct messages denied on the R6 interface.	Int32
r6keychadir-totdiscard	The total number of key change direct messages discarded on the R6 interface.	Int32
r6keychadir-badform	The total number of badly formed key change direct messages on the R6 interface.	Int32
r6keychadir-decodeerr	The total number of key change direct messages on the R6 interface with decode error.	Int32
r6keychadir-unspecerr	The total number of key change direct messages on the R6 interface with unspecified error.	Int32
r6keychadir-missmandtlv	The total number of key change direct messages on the R6 interface with missing mandatory TLVs.	Int32
r6keychadir-tlvvalinval	The total number of key change direct messages on the R6 interface with invalid TLV value.	Int32
r6keychadir-unknowntrlv	The total number of key change direct messages on the R6 interface with unknown TLVs.	Int32
r6keychadir-duptlvfound	The total number of key change direct messages on the R6 interface with duplicate TLVs.	Int32
r6keychadir-nosessfound	The total number of key change direct messages on the R6 interface without any session information.	Int32
r6keychadir-adminprohib	The total number of key change directive messages discarded or denied due to admin prohibit. Triggers: Changes every time a key change directive message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6keychadir-noresourcedrop	The total number of key change directive messages discarded or denied due to resource unavailability. Triggers: Changes every time a key change directive message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6keychadir-transiderr	The total number of key change direct messages on the R6 interface with transaction ID errors.	Int32
r6keychaack-totsent	The total number of key change acknowledgement messages sent on the R6 interface.	Int32
r6keychaack-retranssent	The total number of failures occurred during transaction ID generation and R6 Key change acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32

Variables	Description	Data Type
r6keychaack-totsendfail	The total number of key change acknowledgement messages re-transmitted on the R6 interface.	Int32
r6keychaack-totrec	The total number of key change acknowledgement messages received on the R6 interface.	Int32
r6keychaack-totacc	The total number of key change acknowledgement messages accepted on the R6 interface.	Int32
r6keychaack-totrelay	The total number of key change acknowledgement messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a key change acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6keychaack-totdenied	The total number of key change acknowledgement messages denied on the R6 interface.	Int32
r6keychaack-totdiscard	The total number of key change acknowledgement messages discarded on the R6 interface.	Int32
r6keychaack-badform	The total number of badly formed key change acknowledgement messages on the R6 interface.	Int32
r6keychaack-decodeerr	The total number of key change acknowledgement messages on the R6 interface with decode error.	Int32
r6keychaack-unspecerr	The total number of key change acknowledgement messages on the R6 interface with unspecified error.	Int32
r6keychaack-missmandtlv	The total number of key change acknowledgement messages on the R6 interface with missing mandatory TLVs.	Int32
r6keychaack-tlvvalinval	The total number of key change acknowledgement messages on the R6 interface with invalid TLV value.	Int32
r6keychaack-unknowntrlv	The total number of key change acknowledgement messages on the R6 interface with unknown TLVs.	Int32
r6keychaack-duptlvfound	The total number of key change acknowledgement messages on the R6 interface with duplicate TLVs.	Int32
r6keychaack-nosessfound	The total number of key change acknowledgement messages on the R6 interface without any session information.	Int32
r6keychaack-adminprohib	The total number of key change acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a key change acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6keychaack-noresourcedrop	The total number of key change acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a key change acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6keychaack-transiderr	The total number of key change acknowledgement messages on the R6 interface with transaction ID errors.	Int32
r6keychacnf-totrec	The total number of key change confirm messages received on the R6 interface.	Int32

Variables	Description	Data Type
r6keychacnf-totacc	The total number of key change confirm messages accepted on the R6 interface.	Int32
r6keychacnf-totrelay	The total number of key change confirm messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a key change confirm message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6keychacnf-totdenied	The total number of key change confirm messages denied on the R6 interface.	Int32
r6keychacnf-totdiscard	The total number of key change confirm messages discarded on the R6 interface.	Int32
r6keychacnf-badform	The total number of badly formed key change confirm messages on the R6 interface.	Int32
r6keychacnf-decodeerr	The total number of key change confirm messages on the R6 interface with decode error.	Int32
r6keychacnf-unspecerr	The total number of key change confirm messages on the R6 interface with unspecified error.	Int32
r6keychacnf-missmandtlv	The total number of key change confirm messages on the R6 interface with missing mandatory TLVs.	Int32
r6keychacnf-tlvvalinval	The total number of key change confirm messages on the R6 interface with invalid TLV value.	Int32
r6keychacnf-unknowntrlv	The total number of key change confirm messages on the R6 interface with unknown TLVs.	Int32
r6keychacnf-duptlvfound	The total number of key change confirm messages on the R6 interface with duplicate TLVs.	Int32
r6keychacnf-nosessfound	The total number of key change confirm messages on the R6 interface without any session information.	Int32
r6keychacnf-adminprohib	The total number of key change confirm messages discarded or denied due to admin prohibit. Triggers: Changes every time a key change confirm message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6keychacnf-noresourcedrop	The total number of key change confirm messages discarded or denied due to resource unavailability. Triggers: Changes every time a key change confirm message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r6keychacnf-transiderr	The total number of key change confirm messages on the R6 interface with transaction ID errors.	Int32
r6cmackeycounupd-totsent	The total number of CMAC key count update messages sent on the R6 interface.	Int32
r6cmackeycounupd-retranssent	The total number of CMAC key count update messages re-transmitted on the R6 interface.	Int32
r6cmackeycounupd-totsendfail	The total number of failures occurred during transaction ID generation and R6 CMAC key count update message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32

Variables	Description	Data Type
r6cmackeycounupd-totrec	The total number ofCMAC key count update messages received on the R6 interface.	Int32
r6cmackeycounupd-totacc	The total number ofCMAC key count update messages accepted on the R6 interface.	Int32
r6cmackeycounupd-totrelay	The total number ofCMAC key count update messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a CMAC key count update message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6cmackeycounupd-totdenied	The total number ofCMAC key count update messages denied on the R6 interface.	Int32
r6cmackeycounupd-totdiscard	The total number ofCMAC key count update messages discarded on the R6 interface.	Int32
r6cmackeycounupd-badform	The total number ofbadly formed CMAC key count update messages on the R6 interface.	Int32
r6cmackeycounupd-decodeerr	The total number ofCMAC key count update messages on the R6 interface with decode error.	Int32
r6cmackeycounupd-unspecerr	The total number ofCMAC key count update messages on the R6 interface with unspecified error.	Int32
r6cmackeycounupd-missmandtlv	The total number ofCMAC key count update messages on the R6 interface with missing mandatory TLVs.	Int32
r6cmackeycounupd-tlvvalinval	The total number ofCMAC key count update messages on the R6 interface with invalid TLV value.	Int32
r6cmackeycounupd-unknowntrlv	The total number ofCMAC key count update messages on the R6 interface with unknown TLVs.	Int32
r6cmackeycounupd-dupttlvfound	The total number ofCMAC key count update messages on the R6 interface with duplicate TLVs.	Int32
r6cmackeycounupd-nosessfound	The total number ofCMAC key count update messages on the R6 interface without any session information.	Int32
r6cmackeycounupd-adminprohib	The total number ofCMAC key count update messages discarded or denied due to admin prohibit. Triggers: Changes every time a CMAC key count update message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6cmackeycounupd-noresourcedrop	The total number ofCMAC key count update messages discarded or denied due to resource unavailability. Triggers: Changes every time a CMAC key count update message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6cmackeycounupd-transiderr	The total number ofCMAC key count update messages on the R6 interface with transaction ID errors.	Int32
r6cmackeycounack-totsent	The total number ofCMAC key count acknowledgement messages sent on the R6 interface.	Int32

■ Common Syntax Options

Variables	Description	Data Type
r6cmackeycounack-retranssent	The total number of CMAC key count acknowledgement messages re-transmitted on the R6 interface.	Int32
r6cmackeycounack-totsendfail	The total number of failures occurred during transaction ID generation and R6 CMAC key count acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6cmackeycounack-totrec	The total number of CMAC key count acknowledgement messages received on the R6 interface.	Int32
r6cmackeycounack-totacc	The total number of CMAC key count acknowledgement messages accepted on the R6 interface.	Int32
r6cmackeycounack-totrelay	The total number of CMAC key count acknowledgement messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a CMAC key count acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6cmackeycounack-totdenied	The total number of CMAC key count acknowledgement messages denied on the R6 interface.	Int32
r6cmackeycounack-totdiscard	The total number of CMAC key count acknowledgement messages discarded on the R6 interface.	Int32
r6cmackeycounack-badform	The total number of badly formed CMAC key count acknowledgement messages on the R6 interface.	Int32
r6cmackeycounack-decodeerr	The total number of CMAC key count acknowledgement messages on the R6 interface with decode error.	Int32
r6cmackeycounack-unspecerr	The total number of CMAC key count acknowledgement messages on the R6 interface with unspecified error.	Int32
r6cmackeycounack-mismandtlv	The total number of CMAC key count acknowledgement messages on the R6 interface with missing mandatory TLVs.	Int32
r6cmackeycounack-tlvvalinval	The total number of CMAC key count acknowledgement messages on the R6 interface with invalid TLV value.	Int32
r6cmackeycounack-unknowntrlv	The total number of CMAC key count acknowledgement messages on the R6 interface with unknown TLVs.	Int32
r6cmackeycounack-duptlvfound	The total number of CMAC key count acknowledgement messages on the R6 interface with duplicate TLVs.	Int32
r6cmackeycounack-nosessfound	The total number of CMAC key count acknowledgement messages on the R6 interface without any session information.	Int32
r6cmackeycounack-adminprohib	The total number of CMAC key count acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a CMAC key count acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r6cmackeycounack-noresourcedrop	The total number of CMAC key count acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a CMAC key count acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6cmackeycounack-transiderr	The total number of CMAC key count acknowledgement messages on the R6 interface with transaction ID errors.	Int32
r6horeq-totsent	The total number of R6 handover request messages sent on the R6 interface.	Int32
r6horeq-retranssent	The total number of R6 handover request messages re-transmitted on the R6 interface.	Int32
r6horeq-totsendfail	The total number of failures occurred during transaction ID generation and R6 handover request message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6horeq-totrec	The total number of R6 handover request messages received on the R6 interface.	Int32
r6horeq-totacc	The total number of R6 handover request messages accepted on the R6 interface.	Int32
r6horeq-totrelay	The total number of R6 handover request messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an R6 handover request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6horeq-totdenied	The total number of R6 handover request messages denied on the R6 interface.	Int32
r6horeq-totdiscard	The total number of R6 handover request messages discarded on the R6 interface.	Int32
r6horeq-badform	The total number of badly formed R6 handover request messages on the R6 interface.	Int32
r6horeq-decodeerr	The total number of R6 handover request messages on the R6 interface with decode error.	Int32
r6horeq-unspecerr	The total number of R6 handover request messages on the R6 interface with unspecified error.	Int32
r6horeq-missmandtlv	The total number of R6 handover request messages on the R6 interface with missing mandatory TLVs.	Int32
r6horeq-tlvvalinval	The total number of R6 handover request messages on the R6 interface with invalid TLV value.	Int32
r6horeq-unknowntrlv	The total number of R6 handover request messages on the R6 interface with unknown TLVs.	Int32
r6horeq-duptlvfound	The total number of R6 handover request messages on the R6 interface with duplicate TLVs.	Int32
r6horeq-nosessfound	The total number of R6 handover request messages on the R6 interface without any session information.	Int32
r6horeq-adminprohib	The total number of R6 handover request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 handover request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r6horeq-noresourcedrop	The total number of R6 handover request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 handover request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6horeq-transiderr	The total number of R6 handover request messages on the R6 interface with transaction ID errors.	Int32
r6horsp-totsent	The total number of R6 handover response messages sent on the R6 interface.	Int32
r6horsp-retranssent	The total number of R6 handover response messages re-transmitted on the R6 interface.	Int32
r6horsp-totsendfail	The total number of failures occurred during transaction ID generation and R6 handover response message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6horsp-totrec	The total number of R6 handover response messages received on the R6 interface.	Int32
r6horsp-totacc	The total number of R6 handover response messages accepted on the R6 interface.	Int32
r6horsp-totrelay	The total number of R6 handover response messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an R6 handover response message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6horsp-totdenied	The total number of R6 handover response messages denied on the R6 interface.	Int32
r6horsp-totdiscard	The total number of R6 handover response messages discarded on the R6 interface.	Int32
r6horsp-badform	The total number of badly formed R6 handover response messages on the R6 interface.	Int32
r6horsp-decodeerr	The total number of R6 handover response messages on the R6 interface with decode error.	Int32
r6horsp-unspecerr	The total number of R6 handover response messages on the R6 interface with unspecified error.	Int32
r6horsp-missmandtlv	The total number of R6 handover response messages on the R6 interface with missing mandatory TLVs.	Int32
r6horsp-tlvvalinval	The total number of R6 handover response messages on the R6 interface with invalid TLV value.	Int32
r6horsp-unknowntrlv	The total number of R6 handover response messages on the R6 interface with unknown TLVs.	Int32
r6horsp-duptlvfound	The total number of R6 handover response messages on the R6 interface with duplicate TLVs.	Int32
r6horsp-nosessfound	The total number of R6 handover response messages on the R6 interface without any session information.	Int32

Variables	Description	Data Type
r6horsp-adminprohib	The total number of R6 handover response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 handover response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6horsp-noresourcedrop	The total number of R6 handover response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 handover response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6horsp-transiderr	The total number of R6 handover response messages on the R6 interface with transaction ID errors.	Int32
r6hoack-totsent	The total number of R6 handover acknowledgement messages sent on the R6 interface.	Int32
r6hoack-retranssent	The total number of R6 handover acknowledgement messages re-transmitted on the R6 interface.	Int32
r6hoack-totsendfail	The total number of failures occurred during transaction ID generation and R6 handover acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6hoack-totrec	The total number of R6 handover acknowledgement messages received on the R6 interface.	Int32
r6hoack-totacc	The total number of R6 handover acknowledgement messages accepted on the R6 interface.	Int32
r6hoack-totrelay	The total number of R6 handover acknowledgement messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an R6 handover acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6hoack-totdenied	The total number of R6 handover acknowledgement messages denied on the R6 interface.	Int32
r6hoack-totdiscard	The total number of R6 handover acknowledgement messages discarded on the R6 interface.	Int32
r6hoack-badform	The total number of badly formed R6 handover acknowledgement messages on the R6 interface.	Int32
r6hoack-decodeerr	The total number of R6 handover acknowledgement messages on the R6 interface with decode error.	Int32
r6hoack-unspecerr	The total number of R6 handover acknowledgement messages on the R6 interface with unspecified error.	Int32
r6hoack-missmandtlv	The total number of R6 handover acknowledgement messages on the R6 interface with missing mandatory TLVs.	Int32
r6hoack-tlvvalinval	The total number of R6 handover acknowledgement messages on the R6 interface with invalid TLV value.	Int32

Variables	Description	Data Type
r6hoack-unknowntlv	The total number of R6 handover acknowledgement messages on the R6 interface with unknown TLVs.	Int32
r6hoack-duptlvfound	The total number of R6 handover acknowledgement messages on the R6 interface with duplicate TLVs.	Int32
r6hoack-nosessfound	The total number of R6 handover acknowledgement messages on the R6 interface without any session information.	Int32
r6hoack-adminprohib	The total number of R6 handover acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 handover acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6hoack-noresourcedrop	The total number of R6 handover acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 handover acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6hoack-transiderr	The total number of R6 handover acknowledgement messages on the R6 interface with transaction ID errors.	Int32
r6hocnf-totsent	The total number of R6 handover confirm messages sent on the R6 interface.	Int32
r6hocnf-retranssent	The total number of R6 handover confirm messages re-transmitted on the R6 interface.	Int32
r6hocnf-totsendfail	The total number of failures occurred during transaction ID generation and R6 handover confirm message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6hocnf-totrec	The total number of R6 handover confirm messages received on the R6 interface.	Int32
r6hocnf-totacc	The total number of R6 handover confirm messages accepted on the R6 interface.	Int32
r6hocnf-totrelay	The total number of R6 handover confirm messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an R6 handover confirm message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6hocnf-totdenied	The total number of R6 handover confirm messages denied on the R6 interface.	Int32
r6hocnf-totdiscard	The total number of R6 handover confirm messages discarded on the R6 interface.	Int32
r6hocnf-badform	The total number of badly formed R6 handover confirm messages on the R6 interface.	Int32
r6hocnf-decodeerr	The total number of R6 handover confirm messages on the R6 interface with decode error.	Int32
r6hocnf-unspecerr	The total number of R6 handover confirm messages on the R6 interface with unspecified error.	Int32
r6hocnf-missmandtlv	The total number of R6 handover confirm messages on the R6 interface with missing mandatory TLVs.	Int32
r6hocnf-tlvvalinval	The total number of R6 handover confirm messages on the R6 interface with invalid TLV value.	Int32

Variables	Description	Data Type
r6hocnf-unknowntlv	The total number of R6 handover confirm messages on the R6 interface with unknown TLVs.	Int32
r6hocnf-duptlvfound	The total number of R6 handover confirm messages on the R6 interface with duplicate TLVs.	Int32
r6hocnf-nosessfound	The total number of R6 handover confirm messages on the R6 interface without any session information.	Int32
r6hocnf-adminprohib	The total number of R6 handover confirm messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 handover confirm message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6hocnf-noresourcedrop	The total number of R6 handover confirm messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 handover confirm message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6hocnf-transiderr	The total number of R6 handover confirm messages on the R6 interface with transaction ID errors.	Int32
r6hocmpl-totsent	The total number of R6 handover complete messages sent on the R6 interface.	Int32
r6hocmpl-retranssent	The total number of R6 handover complete messages re-transmitted on the R6 interface.	Int32
r6hocmpl-totsefail	The total number of failures occurred during transaction ID generation and R6 handover complete message not sent for specific interface. This counter is used to count the error while sending the R6 packets.	Int32
r6hocmpl-totrec	The total number of R6 handover complete messages received on the R6 interface.	Int32
r6hocmpl-totacc	The total number of R6 handover complete messages accepted on the R6 interface.	Int32
r6hocmpl-totrelay	The total number of R6 handover complete messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an R6 handover complete message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6hocmpl-totdenied	The total number of R6 handover complete messages denied on the R6 interface.	Int32
r6hocmpl-totdiscard	The total number of R6 handover complete messages discarded on the R6 interface.	Int32
r6hocmpl-badform	The total number of badly formed R6 handover complete messages on the R6 interface.	Int32
r6hocmpl-decodeerr	The total number of R6 handover complete messages on the R6 interface with decode error.	Int32
r6hocmpl-unspecerr	The total number of R6 handover complete messages on the R6 interface with unspecified error.	Int32
r6hocmpl-missmandtlv	The total number of R6 handover complete messages on the R6 interface with missing mandatory TLVs.	Int32

Variables	Description	Data Type
r6hocmpl-tlvvalinval	The total number of R6 handover complete messages on the R6 interface with invalid TLV value.	Int32
r6hocmpl-unknowntlv	The total number of R6 handover complete messages on the R6 interface with unknown TLVs.	Int32
r6hocmpl-duptlvfound	The total number of R6 handover complete messages on the R6 interface with duplicate TLVs.	Int32
r6hocmpl-nosessfound	The total number of R6 handover complete messages on the R6 interface without any session information.	Int32
r6hocmpl-adminprohib	The total number of R6 handover complete messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 handover complete message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6hocmpl-noresourcedrop	The total number of R6 handover complete messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 handover complete message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6hocmpl-transiderr	The total number of R6 handover complete messages on the R6 interface with transaction ID errors.	Int32
r6unknown-totrec	The total number of unknown messages received on the R6 interface.	Int32
r6unknown-totacc	The total number of unknown messages accepted on the R6 interface.	Int32
r6unknown-totrelay	The total number of unknown messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an unknown message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6unknown-totdenied	The total number of unknown messages denied on the R6 interface.	Int32
r6unknown-totdiscard	The total number of unknown messages discarded on the R6 interface.	Int32
r6unknown-badform	The total number of badly formed unknown messages on the R6 interface.	Int32
r6unknown-decodeerr	The total number of unknown messages on the R6 interface with decode error.	Int32
r6unknown-unspecerr	The total number of unknown messages on the R6 interface with unspecified error.	Int32
r6unknown-missmandtlv	The total number of unknown messages on the R6 interface with missing mandatory TLVs.	Int32
r6unknown-tlvvalinval	The total number of unknown messages on the R6 interface with invalid TLV value.	Int32
r6unknown-unknowntlv	The total number of unknown messages on the R6 interface with unknown TLVs.	Int32
r6unknown-duptlvfound	The total number of unknown messages on the R6 interface with duplicate TLVs.	Int32
r6unknown-nosessfound	The total number of unknown messages on the R6 interface without any session information.	Int32

Variables	Description	Data Type
r6unknown-adminprohib	The total number of unknown messages discarded or denied due to admin prohibit. Triggers: Changes every time an unknown message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6unknown-noresourcedrop	The total number of unknown messages discarded or denied due to resource unavailability. Triggers: Changes every time an unknown message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6unknown-transiderr	The total number of unknown messages on the R6 interface with transaction ID errors.	Int32
r6datagrerec-totpackrec	The total number of data packets received through GRE tunnel R6 interface.	Int32
r6datagrerec-prottyperror	Total number of protectd type errors received through GRE tunnel R6 interface.	Int32
r6datagrerec-totbytrec	The total number of data bytes received through GRE tunnel R6 interface.	Int32
r6datagrerec-grekeyabs	The total number of data message received without GRE key through GRE tunnel R6 interface.	Int32
r6datagrerec-grechker	The total number of data message received with checksum error through GRE tunnel R6 interface.	Int32
r6datagrerec-invpacklen	The total number of data message received with invalid packet length error through GRE tunnel R6 interface.	Int32
r6datagrerec-nosessfou	The total number of data message received through GRE tunnel without session information the R6 interface.	Int32
r6datagrerec-unspecerr	The total number of data message received through GRE tunnel with unspecified error R6 interface.	Int32
r6datagresend-totpacksent	Total number of data packets sent through GRE tunnel R6 interface.	Int32
r6datagresend-senderr	Total number of errors happend while sending data packets through GRE tunnel R6 interface.	Int32
r6datagresend-totbytssent	Total number of data bytes sent through GRE tunnel R6 interface.	Int32
r6datagresend-unspeerr	The total number of data message sent through GRE tunnel with unspecified error R6 interface.	Int 32
r6imexitstaind-totsent	The total number of R6 Idle Mode Exit State Indication messages sent to the base station.	Int32
r6imexitstaind-retranssent	The total number of Idle Mode Exit State Indication messages retransmitted on the R6 interface to the base station.	Int32
r6imexitstaind-totsendfail	The total number of Idle Mode Exit State Indication message failures received from the base station and relayed on the R6 interface. This counter is used to count the error while sending the R6 packets.	Int32
r6imexitstaind-totrec	The total number of R6 Idle Mode Exit State Indication messages received by the base station.	Int32
r6imexitstaind-totacc	The total number of R6 Idle Mode Exit State Indication messages accepted by base station.	Int32

Variables	Description	Data Type
r6imexitstaind-totrelay	The total number of R6 Idle Mode Exit State Indication messages sent to the base station and relayed on the R6 interface. Triggers: Changes every time an R6 Idle Mode Exit State Indication message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6imexitstaind-totdenied	The total number of Idle Mode Exit State Indication messages denied on the R6 interface.	Int32
r6imexitstaind-totdiscard	The total number of Idle Mode Exit State Indication messages discarded on the R6 interface.	Int32
r6imexitstaind-badform	The total number of badly formed R6 Idle Mode Exit State Indication messages sent to the base station.	Int32
r6imexitstaind-decodeerr	The total number of R6 Idle Mode Exit State Indication messages sent to the base station with decode errors.	Int32
r6imexitstaind-unspecerr	The total number of R6 Idle Mode Exit State Indication messages sent to the base station with unspecified errors.	Int32
r6imexitstaind-mismandtlv	The total number of R6 Idle Mode Exit State Indication messages sent to the base station with missing mandatory TLVs.	Int32
r6imexitstaind-tlvvalinval	The total number of R6 Idle Mode Exit State Indication messages sent to the base station with an invalid TLV.	Int32
r6imexitstaind-unknownctlv	The total number of R6 Idle Mode Exit State Indication messages sent to the base station with an unknown TLV.	Int32
r6imexitstaind-duptlvfound	The total number of R6 Idle Mode Exit State Indication messages sent to the base station with duplicate TLVs.	Int32
r6imexitstaind-nosessfound	The total number of R6 Idle Mode Exit State Indication messages sent to the base station without any session information.	Int32
r6imexitstaind-admprohibit	The total number of R6 Idle Mode Exit State Indication messages sent to the base station that were discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Idle Mode Exit State Indication message is discarded or denied due to admin prohibit. Availability: across all ASN GW services.	Int32
r6imexitstaind-noresourcedrop	The total number of R6 Idle Mode Exit State Indication messages sent to the base station that were discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Idle Mode Exit State Indication message is discarded or denied due to resource unavailability. Availability: across all ASN GW services.	Int32
r6imexitstaind-transiderr	The total number of R6 Idle Mode Exit State Indication messages sent to the base station with a transaction ID error.	Int32
r6imexitstaindack-totsent	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station.	Int32
r6imexitstaindack-retranssent	The total number of Idle Mode Exit State Indication Acknowledgement messages retransmitted on the R6 interface to the base station.	Int32

Variables	Description	Data Type
r6imexitstaindack-totsendfail	The total number of Idle Mode Exit State Indication Acknowledgement message failures received from the base station and relayed on the R6 interface. This counter is used to count the error while sending the R6 packets.	Int 32
r6imexitstaindack-totrec	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages received by the base station.	Int32
r6imexitstaindack-totacc	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages accepted by base station.	
r6imexitstaindack-totrelay	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station and relayed on the R6 interface. Triggers: Changes every time an R6 Idle Mode Exit State Indication Acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6imexitstaindack-totdenied	The total number of Idle Mode Exit State Indication Acknowledgement messages denied on the R6 interface	Int32
r6imexitstaindack-totdiscard	The total number of Idle Mode Exit State Indication Acknowledgement messages discarded on the R6 interface.	Int32
r6imexitstaindack-badform	The total number of badly formed R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station.	Int32
r6imexitstaindack-decodeerr	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station with decode errors.	Int32
r6imexitstaindack-unspecerr	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station with unspecified errors.	Int32
r6imexitstaindack-missmandtlv	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station with missing mandatory TLVs.	Int32
r6imexitstaindack-tlvvalinval	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station with an invalid TLV.	Int32
r6imexitstaindack-unknowntrlv	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station with an unknown TLV.	Int32
r6imexitstaindack-duptlvfound	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station with duplicate TLVs.	Int32
r6imexitstaindack-nosessfound	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station without any session information.	Int32
r6imexitstaindack-admprohibit	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station that were discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Idle Mode Exit State Indication Acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6imexitstaindack-noresourcedrop	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station that were discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Idle Mode Exit State Indication Acknowledgement message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r6imexitstaindack-transiderr	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages sent to the base station with a transaction ID error.	Int32
r6datapathderegack-totsent	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station.	Int32
r6datapathderegack-retranssent	The total number of Data Path Deregistration Acknowledgement messages retransmitted on the R6 interface to the base station.	Int32
r6datapathderegack-totsendfail	The total number of Data Path Deregistration Acknowledgement message failures received from the base station and relayed on the R6 interface. This counter is used to count the error while sending the R6 packets.	Int32
r6datapathderegack-totrec	The total number of R6 Data Path Deregistration Acknowledgement messages received by the base station.	Int32
r6datapathderegack-totacc	The total number of R6 Idle Mode Exit State Indication Acknowledgement messages accepted by base station.	Int32
r6datapathderegack-totrelay	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station and relayed on the R6 interface. Triggers: Changes every time an R6 Idle Mode Exit State Indication Acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6datapathderegack-totdenied	The total number of Data Path Deregistration Acknowledgement messages denied on the R6 interface	Int32
r6datapathderegack-totdiscard	The total number of Data Path Deregistration Acknowledgement messages discarded on the R6 interface.	Int32
r6datapathderegack-badform	The total number of badly formed R6 Data Path Deregistration Acknowledgement messages sent to the base station.	Int32
r6datapathderegack-decodeerr	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station with decode errors.	Int32
r6datapathderegack-unspecerr	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station with unspecified errors.	Int32
r6datapathderegack-missmandtlv	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station with missing mandatory TLVs.	Int32
r6datapathderegack-tlvvalinval	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station with an invalid TLV.	Int32
r6datapathderegack-unknowntrlv	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station with an unknown TLV.	Int32
r6datapathderegack-duptlvfound	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station with duplicate TLVs.	Int32
r6datapathderegack-nosessfound	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station without any session information.	Int32

Variables	Description	Data Type
r6datapathderegack-admprohibit	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station that were discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Idle Mode Exit State Indication Acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6datapathderegack-noresourcedrop	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station that were discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Idle Mode Exit State Indication Acknowledgement message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r6datapathderegack-transiderr	The total number of R6 Data Path Deregistration Acknowledgement messages sent to the base station with a transaction ID error.	Int32
r4nwexitmsstachareq-totsent	The total number of network exit MS state change request messages sent on the R4 interface.	Int32
r4nwexitmsstachareq-retranssent	The total number of network exit MS state change request messages re-transmitted on the the R4 interface.	Int32
r4nwexitmsstachareq-totsendfail	The total number of failures occurred during transaction ID generation and R4 network exit MS state change request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4nwexitmsstachareq-totrec	The total number of network exit MS state change request messages received on the the R4 interface.	Int32
r4nwexitmsstachareq-totacc	The total number of network exit MS state change request messages accepted on the the R4 interface.	Int32
r4nwexitmsstachareq-totrelay	The total number of network exit MS state change request messages received from the base station and relayed on the the the R4 interface. Triggers: Changes every time a network exit MS state change request message is relayed by the the the R4 interface. Availability: across all ASNGW services.	Int32
r4nwexitmsstachareq-totdenied	The total number of network exit MS state change request messages denied on the the R4 interface.	Int32
r4nwexitmsstachareq-totdiscard	The total number of network exit MS state change request messages discarded on the the R4 interface.	Int32
r4nwexitmsstachareq-badform	The total number of badly formed network exit MS state change request messages on the the R4 interface.	Int32
r4nwexitmsstachareq-decodeerr	The total number of network exit MS state change request messages on the the R4 interface with decode error.	Int32
r4nwexitmsstachareq-unspecerr	The total number of network exit MS state change request messages on the the R4 interface with unspecified error.	Int32
r4nwexitmsstachareq-missmandtlv	The total number of network exit MS state change request messages on the the R4 interface with missing mandatory TLVs.	Int32
r4nwexitmsstachareq-tlvvalinval	The total number of network exit MS state change request messages on the the R4 interface with invalid TLV value.	Int32

Variables	Description	Data Type
r4nwexitmsstachareq-unknowntlv	The total number of network exit MS state change request messages on the the R4 interface with unknown TLVs.	Int32
r4nwexitmsstachareq-dupltlvfound	The total number of network exit MS state change request messages on the the R4 interface with duplicate TLVs.	Int32
r4nwexitmsstachareq-nosessfound	The total number of network exit MS state change request messages on the the R4 interface without any session information.	Int32
r4nwexitmsstachareq-adminprohib	The total number of network exit MS state change request messages discarded or denied due to admin prohibit. Triggers: Changes every time a network exit MS state change request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4nwexitmsstachareq-noresourcedrop	The total number of network exit MS state change request messages discarded or denied due to resource unavailability. Triggers: Changes every time a network exit MS state change request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4nwexitmsstachareq-transiderr	The total number of network exit MS state change request messages on the the R4 interface with transaction ID errors.	Int32
r4nwexitmsstacharsp-totsent	The total number of network exit MS state change response messages sent on the the R4 interface.	Int32
r4nwexitmsstacharsp-retranssent	The total number of network exit MS state change response messages re-transmitted on the the R4 interface.	Int32
r4nwexitmsstacharsp-totsendfail	The total number of failures occurred during transaction ID generation and R4 network exit MS state change response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4nwexitmsstacharsp-totrec	The total number of network exit MS state change response messages received on the the R4 interface.	Int32
r4nwexitmsstacharsp-totacc	The total number of network exit MS state change response messages accepted on the the R4 interface.	Int32
r4nwexitmsstacharsp-totrelay	The total number of network exit MS state change response messages received from the base station and relayed on the the the R4 interface. Triggers: Changes every time a network exit MS state change response message is relayed by the the the R4 interface. Availability: across all ASNGW services.	Int32
r4nwexitmsstacharsp-totdenied	The total number of network exit MS state change response messages denied on the the R4 interface.	Int32
r4nwexitmsstacharsp-totdiscard	The total number of network exit MS state change response messages discarded on the the R4 interface.	Int32
r4nwexitmsstacharsp-badform	The total number of badly formed network exit MS state change response messages on the the R4 interface.	Int32
r4nwexitmsstacharsp-decodeerr	The total number of network exit MS state change response messages on the the R4 interface with decode error.	Int32

Variables	Description	Data Type
r4nwexitmsstacharsp-unspecerr	The total number of network exit MS state change response messages on the the R4 interface with unspecified error.	Int32
r4nwexitmsstacharsp-missmandtlv	The total number of network exit MS state change response messages on the the R4 interface with missing mandatory TLVs.	Int32
r4nwexitmsstacharsp-tlvvalinval	The total number of network exit MS state change response messages on the the R4 interface with invalid TLV value.	Int32
r4nwexitmsstacharsp-unknownltlv	The total number of network exit MS state change response messages on the the R4 interface with unknown TLVs.	Int32
r4nwexitmsstacharsp-duptlvfound	The total number of network exit MS state change response messages on the the R4 interface with duplicate TLVs.	Int32
r4nwexitmsstacharsp-nosessfound	The total number of network exit MS state change response messages on the the R4 interface without any session information.	Int32
r4nwexitmsstacharsp-adminprohib	The total number of network exit MS state change response messages discarded or denied due to admin prohibit. Triggers: Changes every time a network exit MS state change response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4nwexitmsstacharsp-noresourcedrop	The total number of network exit MS state change response messages discarded or denied due to resource unavailability. Triggers: Changes every time a network exit MS state change response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4nwexitmsstacharsp-transiderr	The total number of network exit MS state change response messages on the the R4 interface with transaction ID errors.	Int32
r4contextreq-totsent	The total number of context request messages sent on the the R4 interface.	Int32
r4contextreq-retranssent	The total number of context request messages re-transmitted on the the R4 interface.	Int32
r4contextreq-totsefail	The total number of failures occurred during transaction ID generation and R4 Context Request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4contextreq-totrec	The total number of context request messages received on the the R4 interface.	Int32
r4contextreq-totacc	The total number of context request messages accepted on the the R4 interface.	Int32
r4contextreq-totrelay	The total number of context request messages received from the base station and relayed on the the the R4 interface. Triggers: Changes every time a context request message is relayed by the the the R4 interface. Availability: across all ASNGW services.	Int32
r4contextreq-totdenied	The total number of context request messages denied on the the R4 interface.	Int32
r4contextreq-totdiscard	The total number of context request messages discarded on the the R4 interface.	Int32
r4contextreq-badform	The total number of badly formed context request messages on the the R4 interface.	Int32
r4contextreq-decodeerr	The total number of context request messages on the the R4 interface with decode error.	Int32

Variables	Description	Data Type
r4contextreq-unspecerr	The total number of context request messages on the the R4 interface with unspecified error.	Int32
r4contextreq-missmandtlv	The total number of context request messages on the the R4 interface with missing mandatory TLVs.	Int32
r4contextreq-tlvvalinval	The total number of context request messages on the the R4 interface with invalid TLV value.	Int32
r4contextreq-unknowntlv	The total number of context request messages on the the R4 interface with unknown TLVs.	Int32
r4contextreq-duptlvfound	The total number of context request messages on the the R4 interface with duplicate TLVs.	Int32
r4contextreq-nosessfound	The total number of context request messages on the the R4 interface without any session information.	Int32
r4contextreq-adminprohib	The total number of context request messages discarded or denied due to admin prohibit. Triggers: Changes every time a context request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4contextreq-noresourcedrop	The total number of context request messages discarded or denied due to resource unavailability. Triggers: Changes every time a context request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4contextreq-transiderr	The total number of context request messages on the the R4 interface with transaction ID errors.	Int32
r4contextrepo-totsent	The total number of context report messages sent on the the R4 interface.	Int32
r4contextrepo-retranssent	The total number of context report messages re-transmitted on the the R4 interface.	Int32
r4contextrepo-totsendfail	The total number of failures occurred during transaction ID generation and R4 Context Report message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4contextrepo-totrec	The total number of context report messages received on the the R4 interface.	Int32
r4contextrepo-totacc	The total number of context report messages accepted on the the R4 interface.	Int32
r4contextrepo-totrelay	The total number of context report messages received from the base station and relayed on the the the R4 interface. Triggers: Changes every time a context report message is relayed by the the the R4 interface. Availability: across all ASNGW services.	Int32
r4contextrepo-totdenied	The total number of context report messages denied on the the R4 interface.	Int32
r4contextrepo-totdiscard	The total number of context report messages discarded on the the R4 interface.	Int32
r4contextrepo-badform	The total number of badly formed context report messages on the the R4 interface.	Int32
r4contextrepo-decodeerr	The total number of context report messages on the the R4 interface with decode error.	Int32

Variables	Description	Data Type
r4contextrepo-unspecerr	The total number of context report messages on the the R4 interface with unspecified error.	Int32
r4contextrepo-missmandtlv	The total number of context report messages on the the R4 interface with missing mandatory TLVs.	Int32
r4contextrepo-tlvvalinval	The total number of context report messages on the the R4 interface with invalid TLV value.	Int32
r4contextrepo-unknownltlv	The total number of context report messages on the the R4 interface with unknown TLVs.	Int32
r4contextrepo-duptlvfound	The total number of context report messages on the the R4 interface with duplicate TLVs.	Int32
r4contextrepo-nosessfound	The total number of context report messages on the the R4 interface without any session information.	Int32
r4contextrepo-adminprohib	The total number of context report messages discarded or denied due to admin prohibit. Triggers: Changes every time a context report message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4contextrepo-noresourcedrop	The total number of context report messages discarded or denied due to resource unavailability. Triggers: Changes every time a context report message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4contextrepo-transiderr	The total number of context report messages on the the R4 interface with transaction ID errors.	Int32
r4contextack-totsent	The total number of context acknowledgement messages sent on the the R4 interface.	Int32
r4contextack-retranssent	The total number of context acknowledgement messages re-transmitted on the the R4 interface.	Int32
r4contextack-totsendfail	The total number of failures occurred during transaction ID generation and R4 Context acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4contextack-totrec	The total number of context acknowledgement messages received on the the R4 interface.	Int32
r4contextack-totacc	The total number of context acknowledgement messages accepted on the the R4 interface.	Int32
r4contextack-totrelay	The total number of context acknowledgement messages received from the base station and relayed on the the the R4 interface. Triggers: Changes every time a context acknowledgement message is relayed by the the the R4 interface. Availability: across all ASNGW services.	Int32
r4contextack-totdenied	The total number of context acknowledgement messages denied on the the R4 interface.	Int32
r4contextack-totdiscard	The total number of context acknowledgement messages discarded on the the R4 interface.	Int32
r4contextack-badform	The total number of badly formed context acknowledgement messages on the the R4 interface.	Int32

Variables	Description	Data Type
r4contextack-decodeerr	The total number of context acknowledgement messages on the the the R4 interface with decode error.	Int32
r4contextack-unspecerr	The total number of context acknowledgement messages on the the the R4 interface with unspecified error.	Int32
r4contextack-missmandtlv	The total number of context acknowledgement messages on the the the R4 interface with missing mandatory TLVs.	Int32
r4contextack-tlvvalinval	The total number of context acknowledgement messages on the the the R4 interface with invalid TLV value.	Int32
r4contextack-unknowntrlv	The total number of context acknowledgement messages on the the the R4 interface with unknown TLVs.	Int32
r4contextack-duptlvfound	The total number of context acknowledgement messages on the the the R4 interface with duplicate TLVs.	Int32
r4contextack-nosessfound	The total number of context acknowledgement messages on the the the R4 interface without any session information.	Int32
r4contextack-adminprohib	The total number of context acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a context acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4contextack-noresourcedrop	The total number of context acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a context acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4contextack-transiderr	The total number of context acknowledgement messages on the the the R4 interface with transaction ID errors.	Int32
r4autheaptra-totsent	The total number of authentication EAP transfer messages sent on the the the R4 interface.	Int32
r4autheaptra-retranssent	The total number of authentication EAP transfer messages re-transmitted on the the the R4 interface.	Int32
r4autheaptra-totsendfail	The total number of failures that occurred during transaction ID generation and R4 EAP transfer message failure. This counter is used to count the error while sending the R4 packets.	Int32
r4autheaptra-totrec	The total number of authentication EAP transfer messages received on the the the R4 interface.	Int32
r4autheaptra-totacc	The total number of authentication EAP transfer messages accepted on the the the R4 interface.	Int32
r4autheaptra-totrelay	The total number of authentication EAP transfer messages received from the base station and relayed on the the the R4 interface. Triggers: Changes every time an authentication EAP transfer message is relayed by the the the R4 interface. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r4autheaptra-totdenied	The total number of authentication EAP transfer messages denied on the the the R4 interface.	Int32
r4autheaptra-totdiscard	The total number of authentication EAP transfer messages discarded on the the the R4 interface.	Int32
r4autheaptra-badform	The total number of badly formed authentication EAP transfer messages on the the the R4 interface.	Int32
r4autheaptra-decodeerr	The total number of authentication EAP transfer messages on the the R4 interface with decode error.	Int32
r4autheaptra-unspecerr	The total number of authentication EAP transfer messages on the the R4 interface with unspecified error.	Int32
r4autheaptra-missmandtlv	The total number of authentication EAP transfer messages on the the R4 interface with missing mandatory TLVs.	Int32
r4autheaptra-tlvvalinval	The total number of authentication EAP transfer messages on the the R4 interface with invalid TLV value.	Int32
r4autheaptra-unknowntrlv	The total number of authentication EAP transfer messages on the the R4 interface with unknown TLVs.	Int32
r4autheaptra-duptlvfound	The total number of authentication EAP transfer messages on the the R4 interface with duplicate TLVs.	Int32
r4autheaptra-nosessfound	The total number of authentication EAP transfer messages on the the R4 interface without any session information.	Int32
r4autheaptra-adminprohib	The total number of authentication EAP transfer messages on the the R4 interface discarded or denied due to admin prohibit.	Int32
r4autheaptra-noresourcedrop	The total number of authentication EAP transfer messages on the the R4 interface discarded or denied due to resource unavailability.	Int32
r4autheaptra-transiderr	The total number of authentication EAP transfer messages on the the R4 interface with transaction ID errors.	Int32
r4autheapsta-totrec	The total number of authentication EAP start messages sent on the the R4 interface.	Int32
r4autheapsta-totacc	The total number of authentication EAP start messages accepted on the the R4 interface.	Int32
r4autheapsta-totrelay	The total number of authentication EAP start messages received from the base station and relayed on the the the R4 interface. Triggers: Changes every time an authentication EAP start message is relayed by the the the R4 interface. Availability: across all ASNGW services.	Int32
r4autheapsta-totdenied	The total number of authentication EAP start messages denied on the the R4 interface.	Int32
r4autheapsta-totdiscard	The total number of authentication EAP start messages discarded on the the R4 interface.	Int32
r4autheapsta-badform	The total number of badly formed authentication EAP start messages on the the R4 interface.	Int32
r4autheapsta-decodeerr	The total number of authentication EAP start messages on the the R4 interface with decode error.	Int32

Variables	Description	Data Type
r4autheapsta-unspecerr	The total number of authentication EAP start messages on the the R4 interface with unspecified error.	Int32
r4autheapsta-missmandtlv	The total number of authentication EAP start messages on the the R4 interface with missing mandatory TLVs.	Int32
r4autheapsta-tlvvalinval	The total number of authentication EAP start messages on the the R4 interface with invalid TLV value.	Int32
r4autheapsta-unknowntrlv	The total number of authentication EAP start messages on the the R4 interface with unknown TLVs.	Int32
r4autheapsta-duptlvfound	The total number of authentication EAP start messages on the the R4 interface with duplicate TLVs.	Int32
r4autheapsta-nosessfound	The total number of authentication EAP start messages on the the R4 interface without any session information.	Int32
r4autheapsta-adminprohib	The total number of authentication EAP start messages discarded or denied due to admin prohibit. Triggers: Changes every time an authentication EAP start message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4autheapsta-noresourcedrop	The total number of authentication EAP start messages discarded or denied due to resource unavailability. Triggers: Changes every time an authentication EAP start message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4autheapsta-transiderr	The total number of authentication EAP start messages on the the R4 interface with transaction ID errors.	Int32
r4datapathpreregreq-totsent	The total number of data path pre-registration request messages sent on the the R4 interface.	Int32
r4datapathpreregreq-retranssent	The total number of data path pre-registration request messages re-transmitted on the the R4 interface.	Int32
r4datapathpreregreq-totendfail	The total number of failures occurred during transaction ID generation and R4 data path pre-registration request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathpreregreq-totrec	The total number of data path pre-registration request messages received on the the R4 interface.	Int32
r4datapathpreregreq-totacc	The total number of data path pre-registration request messages accepted on the the R4 interface.	Int32
r4datapathpreregreq-totrelay	The total number of data path pre-registration request messages received from the base station and relayed on the the the R4 interface. Triggers: Changes every time a data path pre-registration request message is relayed by the the the R4 interface. Availability: across all ASNGW services.	Int32
r4datapathpreregreq-totdenied	The total number of data path pre-registration request messages denied on the the R4 interface.	Int32

Variables	Description	Data Type
r4datapathpreregreq-totdiscard	The total number of data path pre-registration request messages discarded on the the R4 interface.	Int32
r4datapathpreregreq-badform	The total number of badly formed data path pre-registration request messages on the the R4 interface.	Int32
r4datapathpreregreq-decodeerr	The total number of data path pre-registration request messages on the the R4 interface with decode error.	Int32
r4datapathpreregreq-unspecerr	The total number of data path pre-registration request messages on the the R4 interface with unspecified error.	Int32
r4datapathpreregreq-missmandtlv	The total number of data path pre-registration request messages on the the R4 interface with missing mandatory TLVs.	Int32
r4datapathpreregreq-tlvvalinval	The total number of data path pre-registration request messages on the the R4 interface with invalid TLV value.	Int32
r4datapathpreregreq-unknowntlv	The total number of data path pre-registration request messages on the the R4 interface with unknown TLVs.	Int32
r4datapathpreregreq-duptlvfound	The total number of data path pre-registration request messages on the the R4 interface with duplicate TLVs.	Int32
r4datapathpreregreq-nosessfound	The total number of data path pre-registration request messages on the the R4 interface without any session information.	Int32
r4datapathpreregreq-adminprohib	The total number of data path pre-registration request messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path pre-registration request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4datapathpreregreq-noresourcedrop	The total number of data path pre-registration request messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path pre-registration request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4datapathpreregreq-transiderr	The total number of data path pre-registration request messages on the the R4 interface with transaction ID errors.	Int32
r4datapathpreregresp-totsent	The total number of data path pre-registration response messages sent on the the R4 interface.	Int32
r4datapathpreregresp-retranssent	The total number of data path pre-registration response messages re-transmitted on the the R4 interface.	Int32
r4datapathpreregresp-totsendfail	The total number of failures occurred during transaction ID generation and R4 data path pre-registration response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathpreregresp-totrec	The total number of data path pre-registration response messages received on the the R4 interface.	Int32
r4datapathpreregresp-totacc	The total number of data path pre-registration response messages accepted on the the R4 interface.	Int32

Variables	Description	Data Type
r4datapathpreregsp-totrelay	The total number of data path pre-registration response messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a data path pre-registration response message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4datapathpreregsp-totdenied	The total number of data path pre-registration response messages denied on the the R4 interface.	Int32
r4datapathpreregsp-totdiscard	The total number of data path pre-registration response messages discarded on the the R4 interface.	Int32
r4datapathpreregsp-badform	The total number of badly formed data path pre-registration response messages on the the R4 interface.	Int32
r4datapathpreregsp-decodeerr	The total number of data path pre-registration response messages on the the R4 interface with decode error.	Int32
r4datapathpreregsp-unspecerr	The total number of data path pre-registration response messages on the the R4 interface with unspecified error.	Int32
r4datapathpreregsp-missmandtlv	The total number of data path pre-registration response messages on the the R4 interface with missing mandatory TLVs.	Int32
r4datapathpreregsp-tlvvalinval	The total number of data path pre-registration response messages on the the R4 interface with invalid TLV value.	Int32
r4datapathpreregsp-unknowntrlv	The total number of data path pre-registration response messages on the the R4 interface with unknown TLVs.	Int32
r4datapathpreregsp-duptlvfound	The total number of data path pre-registration response messages on the the R4 interface with duplicate TLVs.	Int32
r4datapathpreregsp-nosessfound	The total number of data path pre-registration response messages on the the R4 interface without any session information.	Int32
r4datapathpreregsp-adminprohib	The total number of data path pre-registration response messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path pre-registration response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4datapathpreregsp-noresourcedrop	The total number of data path pre-registration response messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path pre-registration response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4datapathpreregsp-transiderr	The total number of data path pre-registration response messages on the the R4 interface with transaction ID errors.	Int32
r4datapathpreregack-totsent	The total number of data path pre-registration acknowledgement messages sent on the the R4 interface.	Int32
r4datapathpreregack-retranssent	The total number of data path pre-registration acknowledgement messages re-transmitted on the the R4 interface.	Int32

Variables	Description	Data Type
r4datapathpreregack-totsendfail	The total number of failures occurred during transaction ID generation and R4 data path pre-registration acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathpreregack-totrec	The total number of data path pre-registration acknowledgement messages received on the the R4 interface.	Int32
r4datapathpreregack-totacc	The total number of data path pre-registration acknowledgement messages accepted on the the R4 interface.	Int32
r4datapathpreregack-totrelay	The total number of data path pre-registration acknowledgement messages received from the base station and relayed on the the the R4 interface. Triggers: Changes every time a data path pre-registration acknowledgement message is relayed by the the the R4 interface. Availability: across all ASNGW services.	Int32
r4datapathpreregack-totdenied	The total number of data path pre-registration acknowledgement messages denied on the the R4 interface.	Int32
r4datapathpreregack-totdiscard	The total number of data path pre-registration acknowledgement messages discarded on the the R4 interface.	Int32
r4datapathpreregack-badform	The total number of badly formed data path pre-registration acknowledgement messages on the the R4 interface.	Int32
r4datapathpreregack-decodeerr	The total number of data path pre-registration acknowledgement messages on the the R4 interface with decode error.	Int32
r4datapathpreregack-unspecerr	The total number of data path pre-registration acknowledgement messages on the the R4 interface with unspecified error.	Int32
r4datapathpreregack-missmandtlv	The total number of data path pre-registration acknowledgement messages on the the R4 interface with missing mandatory TLVs.	Int32
r4datapathpreregack-tlvvalinval	The total number of data path pre-registration acknowledgement messages on the the R4 interface with invalid TLV value.	Int32
r4datapathpreregack-unknowntrlv	The total number of data path pre-registration acknowledgement messages on the the R4 interface with unknown TLVs.	Int32
r4datapathpreregack-duptlvfound	The total number of data path pre-registration acknowledgement messages on the the R4 interface with duplicate TLVs.	Int32
r4datapathpreregack-nosessfound	The total number of data path pre-registration acknowledgement messages on the the R4 interface without any session information.	Int32
r4datapathpreregack-adminprohib	The total number of data path pre-registration acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path pre-registration acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4datapathpreregack-noresourcedrop	The total number of data path pre-registration acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path pre-registration acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32

Variables	Description	Data Type
r4datapathpreregack-transiderr	The total number of data path pre-registration acknowledgement messages on the the R4 interface with transaction ID errors.	Int32
r4datapathregreq-totsent	The total number of data path registration request messages sent on the the R4 interface.	Int32
r4datapathregreq-retranssent	The total number of data path registration request messages re-transmitted on the the R4 interface.	Int32
r4datapathregreq-totsendfail	The total number of failures occurred during transaction ID generation and R4 data path registration request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathregreq-totrec	The total number of data path registration request messages received on the the R4 interface.	Int32
r4datapathregreq-totacc	The total number of data path registration request messages accepted on the the R4 interface.	Int32
r4datapathregreq-totelay	The total number of data path registration request messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a data path registration request message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4datapathregreq-totdenied	The total number of data path registration request messages denied on the the R4 interface.	Int32
r4datapathregreq-totdiscard	The total number of data path registration request messages discarded on the the R4 interface.	Int32
r4datapathregreq-badform	The total number of badly formed data path registration request messages on the the R4 interface.	Int32
r4datapathregreq-decodeerr	The total number of data path registration request messages on the the R4 interface with decode error.	Int32
r4datapathregreq-unspecerr	The total number of data path registration request messages on the R4 interface with unspecified error.	Int32
r4datapathregreq-misssmandtlv	The total number of data path registration request messages on the R4 interface with missing mandatory TLVs.	Int32
r4datapathregreq-tlvvalinval	The total number of data path registration request messages on the R4 interface with invalid TLV value.	Int32
r4datapathregreq-unknowntrlv	The total number of data path registration request messages on the R4 interface with unknown TLVs.	Int32
r4datapathregreq-duptrlvfound	The total number of data path registration request messages on the R4 interface with duplicate TLVs.	Int32
r4datapathregreq-nosessfound	The total number of data path registration request messages on the R4 interface without any session information.	Int32
r4datapathregreq-adminprohib	The total number of data path registration request messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path registration request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r4datapathregreq-noresourcedrop	The total number of data path registration request messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path registration request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r4datapathregreq-transiderr	The total number of data path registration request messages on the R4 interface with transaction ID errors.	Int32
r4datapathregrsp-totsent	The total number of data path registration response messages sent on the R4 interface.	Int32
r4datapathregrsp-retranssent	The total number of data path registration response messages re-transmitted on the R4 interface.	Int32
r4datapathregrsp-totsendfail	The total number of failures occurred during transaction ID generation and R4 data path registration response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathregrsp-totrec	The total number of data path registration response messages received on the R4 interface.	Int32
r4datapathregrsp-totacc	The total number of data path registration response messages accepted on the R4 interface.	Int32
r4datapathregrsp-totrelay	The total number of data path registration response messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a data path registration response message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4datapathregrsp-totdenied	The total number of data path registration response messages denied on the R4 interface.	Int32
r4datapathregrsp-totdiscard	The total number of data path registration response messages discarded on the R4 interface.	Int32
r4datapathregrsp-badform	The total number of badly formed data path registration response messages on the R4 interface.	Int32
r4datapathregrsp-decodeerr	The total number of data path registration response messages on the R4 interface with decode error.	Int32
r4datapathregrsp-unspecerr	The total number of data path registration response messages on the R4 interface with unspecified error.	Int32
r4datapathregrsp-missmandtlv	The total number of data path registration response messages on the R4 interface with missing mandatory TLVs.	Int32
r4datapathregrsp-tlvvalinval	The total number of data path registration response messages on the R4 interface with invalid TLV value.	Int32
r4datapathregrsp-unknowntrlv	The total number of data path registration response messages on the R4 interface with unknown TLVs.	Int32
r4datapathregrsp-duptrlvfound	The total number of data path registration response messages on the R4 interface with duplicate TLVs.	Int32
r4datapathregrsp-nosessfound	The total number of data path registration response messages on the R4 interface without any session information.	Int32

Variables	Description	Data Type
r4datapathregrsp-adminprohib	The total number of data path registration response messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path registration response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4datapathregrsp-noresourcedrop	The total number of data path registration response messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path registration response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4datapathregrsp-transiderr	The total number of data path registration response messages on the R4 interface with transaction ID errors.	Int32
r4datapathregack-totsent	The total number of data path registration acknowledgement messages sent on the R4 interface.	Int32
r4datapathregack-retranssent	The total number of data path registration acknowledgement messages re-transmitted on the R4 interface.	Int32
r4datapathregack-totsendfail	The total number of failures occurred during transaction id generation and R4 data path registration acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathregack-totrec	The total number of data path registration acknowledgement messages received on the R4 interface.	Int32
r4datapathregack-totacc	The total number of data path registration acknowledgement messages accepted on the R4 interface.	Int32
r4datapathregack-totrelay	The total number of data path registration acknowledgement messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a data path registration acknowledgement message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4datapathregack-totdenied	The total number of data path registration acknowledgement messages denied on the R4 interface.	Int32
r4datapathregack-totdiscard	The total number of data path registration acknowledgement messages discarded on the R4 interface.	Int32
r4datapathregack-badform	The total number of badly formed data path registration acknowledgement messages on the R4 interface.	Int32
r4datapathregack-decodeerr	The total number of data path registration acknowledgement messages on the R4 interface with decode error.	Int32
r4datapathregack-unspecerr	The total number of data path registration acknowledgement messages on the R4 interface with unspecified error.	Int32
r4datapathregack-missmandtlv	The total number of data path registration acknowledgement messages on the R4 interface with missing mandatory TLVs.	Int32
r4datapathregack-tlvvalinval	The total number of data path registration acknowledgement messages on the R4 interface with invalid TLV value.	Int32

Variables	Description	Data Type
r4datapathregack-unknowntlv	The total number of data path registration acknowledgement messages on the R4 interface with unknown TLVs.	Int32
r4datapathregack-duptlvfound	The total number of data path registration acknowledgement messages on the R4 interface with duplicate TLVs.	Int32
r4datapathregack-nosessfound	The total number of data path registration acknowledgement messages on the R4 interface without any session information.	Int32
r4datapathregack-adminprohib	The total number of data path registration acknowledgement messages denied on the R4 interface.	Int32
r4datapathregack-noresourcedrop	The total number of data path registration acknowledgement messages discarded or denied due on the R4 interface to resource unavailability.	Int32
r4datapathregack-transiderr	The total number of data path registration acknowledgement messages on the R4 interface with transaction ID errors.	Int32
r4pathmodreq-totsent	The total number of data path modification request messages sent on the R4 interface.	Int32
r4pathmodreq-retranssent	The total number of data path modification request messages re-transmitted on the R4 interface.	Int32
r4pathmodreq-totsendfail	The total number of failed data path modification requests that occurred. This counter is used to count the error while sending the R4 packets.	Int32
r4pathmodreq-totrec	The total number of data path modification request messages received on the R4 interface.	Int32
r4pathmodreq-totacc	The total number of data path modification request messages accepted on the R4 interface.	Int32
r4pathmodreq-totrelay	The total number of data path modification request messages received from the base station and relayed on the the R4 interface.	Int32
r4pathmodreq-totdenied	The total number of data path modification request messages denied on the R4 interface.	Int32
r4pathmodreq-totdiscard	The total number of data path modification request messages discarded on the R4 interface.	Int32
r4pathmodreq-badform	The total number of badly formed data path modification request messages on the R4 interface.	Int32
r4pathmodreq-decodeerr	The total number of data path modification request messages on the R4 interface with decode error.	Int32
r4pathmodreq-unspecerr	The total number of data path modification request messages on the R4 interface with unspecified error.	Int32
r4pathmodreq-missmandtlv	The total number of data path modification request messages on the R4 interface with missing mandatory TLVs.	Int32
r4pathmodreq-tlvvalinval	The total number of data path modification request messages on the R4 interface with invalid TLV value.	Int32
r4pathmodreq-unknowntlv	The total number of data path modification request messages on the R4 interface with unknown TLVs.	Int32
r4pathmodreq-duptlvfound	The total number of data path modification request messages on the R4 interface with duplicate TLVs.	Int32

Variables	Description	Data Type
r4pathmodreq-nosessfound	The total number of data path modification request messages on the R4 interface without any session information.	Int32
r4pathmodreq-adminprohib	The total number of administratively prohibited data path modification request messages on the R4 interface.	Int32
r4pathmodreq-noresourcedrop	The total number of data path modification request messages discarded or denied on the R4 interface due to a lack of resources.	Int32
r4pathmodreq-transiderr	The total number of data path modification request messages on the R4 interface with transaction ID errors.	Int32
r4pathmodrsp-totsent	The total number of data path modification response messages sent on the R4 interface.	Int32
r4pathmodrsp-retranssent	The total number of data path modification response messages re-transmitted on the R4 interface.	Int32
r4pathmodrsp-totsendfail	The total number of failed data path modification response that occurred. This counter is used to count the error while sending the R4 packets.	Int32
r4pathmodrsp-totrec	The total number of data path modification response messages received on the R4 interface.	Int32
r4pathmodrsp-totacc	The total number of data path modification response messages accepted on the R4 interface.	Int32
r4pathmodrsp-totrelay	The total number of data path modification response messages received from the base station and relayed on the the R4 interface.	Int32
r4pathmodrsp-totdenied	The total number of data path modification response messages denied on the R4 interface.	Int32
r4pathmodrsp-totdiscard	The total number of data path modification response messages discarded on the R4 interface.	Int32
r4pathmodrsp-badform	The total number of badly formed data path modification response messages on the R4 interface.	Int32
r4pathmodrsp-decodeerr	The total number of data path modification response messages on the R4 interface with decode error.	Int32
r4pathmodrsp-unspecerr	The total number of data path modification response messages on the R4 interface with unspecified error.	Int32
r4pathmodrsp-missmandtlv	The total number of data path modification response messages on the R4 interface with missing mandatory TLVs.	Int32
r4pathmodrsp-tlvvalinval	The total number of data path modification response messages on the R4 interface with invalid TLV value.	Int32
r4pathmodrsp-unknownnltlv	The total number of data path modification response messages on the R4 interface with unknown TLVs.	Int32
r4pathmodrsp-duptlvfound	The total number of data path modification response messages on the R4 interface with duplicate TLVs.	Int32
r4pathmodrsp-nosessfound	The total number of data path modification response messages on the R4 interface without any session information.	Int32

Variables	Description	Data Type
r4pathmodrsp-adminprohib	The total number of administratively prohibited data path modification response messages on the R4 interface.	Int32
r4pathmodrsp-noresourcedrop	The total number of data path modification response messages discarded or denied on the R4 interface due to resource unavailability.	Int32
r4pathmodrsp-transiderr	The total number of data path modification response messages on the R4 interface with transaction ID errors.	Int32
r4pathmodack-totsent	The total number of data path modification acknowledgement messages sent on the R4 interface.	Int32
r4pathmodack-retranssent	The total number of data path modification acknowledgement messages re-transmitted on the R4 interface.	Int32
r4pathmodack-totsendfail	The total number of failed data path modification acknowledgement that occurred. This counter is used to count the error while sending the R4 packets.	Int32
r4pathmodack-totrec	The total number of data path modification acknowledgement messages received on the R4 interface.	Int32
r4pathmodack-totacc	The total number of data path modification acknowledgement messages accepted on the R4 interface.	Int32
r4pathmodack-totrelay	The total number of data path modification acknowledgement messages received from the base station and relayed on the the R4 interface.	Int32
r4pathmodack-totdenied	The total number of data path modification acknowledgement messages denied on the R4 interface.	Int32
r4pathmodack-totdiscard	The total number of data path modification acknowledgement messages discarded on the R4 interface.	Int32
r4pathmodack-badform	The total number of badly formed data path modification acknowledgement messages on the R4 interface.	Int32
r4pathmodack-decodeerr	The total number of data path modification acknowledgement messages on the R4 interface with decode error.	Int32
r4pathmodack-unspecerr	The total number of data path modification acknowledgement messages on the R4 interface with unspecified error.	Int32
r4pathmodack-missmandtlv	The total number of data path modification acknowledgement messages on the R4 interface with missing mandatory TLVs.	Int32
r4pathmodack-tlvvalinval	The total number of data path modification acknowledgement messages on the R4 interface with invalid TLV value.	Int32
r4pathmodack-unknownltlv	The total number of data path modification acknowledgement messages on the R4 interface with unknown TLVs.	Int32
r4pathmodack-duptlvfound	The total number of data path modification acknowledgement messages on the R4 interface with duplicate TLVs.	Int32
r4pathmodack-nosessfound	The total number of data path modification acknowledgement messages on the R4 interface without any session information.	Int32

Variables	Description	Data Type
r4pathmodack-adminprohib	The total number of administratively prohibited data path modification acknowledgement messages on the R4 interface.	Int32
r4pathmodack-noresourcedrop	The total number of data path modification acknowledgement messages discarded or denied on the R4 interface due to resource unavailability.	Int32
r4pathmodack-transiderr	The total number of data path modification acknowledgement messages on the R4 interface with transaction ID errors.	Int32
r4datapathderegreq-totsent	The total number of data path deregistration request messages sent on the R4 interface.	Int32
r4datapathderegreq-retranssent	The total number of data path deregistration request messages re-transmitted on the R4 interface.	Int32
r4datapathderegreq-totsendfail	The total number of failures occurred during transaction id generation and R4 data path de-registration request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathderegreq-totrec	The total number of data path deregistration request messages received on the R4 interface.	Int32
r4datapathderegreq-totacc	The total number of data path deregistration request messages accepted on the R4 interface.	Int32
r4datapathderegreq-totrelay	The total number of data path de-registration request messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a data path de-registration request message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4datapathderegreq-totdenied	The total number of data path deregistration request messages denied on the R4 interface.	Int32
r4datapathderegreq-totdiscard	The total number of data path deregistration request messages discarded on the R4 interface.	Int32
r4datapathderegreq-badform	The total number of badly formed data path deregistration request messages on the R4 interface.	Int32
r4datapathderegreq-decodeerr	The total number of data path deregistration request messages on the R4 interface with decode error.	Int32
r4datapathderegreq-unspecerr	The total number of data path deregistration request messages on the R4 interface with unspecified error.	Int32
r4datapathderegreq-missmandtlv	The total number of data path deregistration request messages on the R4 interface with missing mandatory TLVs.	Int32
r4datapathderegreq-tlvvalinval	The total number of data path deregistration request messages on the R4 interface with invalid TLV value.	Int32
r4datapathderegreq-unknowntrlv	The total number of data path deregistration request messages on the R4 interface with unknown TLVs.	Int32
r4datapathderegreq-duptrlvfound	The total number of data path deregistration request messages on the R4 interface with duplicate TLVs.	Int32

Variables	Description	Data Type
r4datapathderegreq-nosessfound	The total number of data path deregistration request messages on the R4 interface without any session information.	Int32
r4datapathderegreq-adminprohib	The total number of data path de-registration request messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path de-registration request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4datapathderegreq-noresourcedrop	The total number of data path de-registration request messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path de-registration request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4datapathderegreq-transiderr	The total number of data path deregistration request messages on the R4 interface with transaction ID errors.	Int32
r4datapathderegresp-totsent	The total number of data path deregistration response messages sent on the R4 interface.	Int32
r4datapathderegresp-retranssent	The total number of data path deregistration response messages re-transmitted on the R4 interface.	Int32
r4datapathderegresp-totsendfail	The total number of failures occurred during transaction id generation and R4 data path de-registration response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathderegresp-totrec	The total number of data path deregistration response messages received on the R4 interface.	Int32
r4datapathderegresp-totacc	The total number of data path deregistration response messages accepted on the R4 interface.	Int32
r4datapathderegresp-totrelay	The total number of data path de-registration response messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a data path de-registration response message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4datapathderegresp-totdenied	The total number of data path deregistration response messages denied on the R4 interface.	Int32
r4datapathderegresp-totdiscard	The total number of data path deregistration response messages discarded on the R4 interface.	Int32
r4datapathderegresp-badform	The total number of badly formed data path deregistration response messages on the R4 interface.	Int32
r4datapathderegresp-decodeerr	The total number of data path deregistration response messages on the R4 interface with decode error.	Int32
r4datapathderegresp-unspecerr	The total number of data path deregistration response messages on the R4 interface with unspecified error.	Int32
r4datapathderegresp-missmandtlv	The total number of data path deregistration response messages on the R4 interface with missing mandatory TLVs.	Int32

■ Common Syntax Options

Variables	Description	Data Type
r4datapathderegsp-tlvvalinval	The total number of data path deregistration response messages on the R4 interface with invalid TLV value.	Int32
r4datapathderegsp-unknownctlv	The total number of data path deregistration response messages on the R4 interface with unknown TLVs.	Int32
r4datapathderegsp-dupctlvfound	The total number of data path deregistration response messages on the R4 interface with duplicate TLVs.	Int32
r4datapathderegsp-nosessfound	The total number of data path deregistration response messages on the R4 interface without any session information.	Int32
r4datapathderegsp-adminprohib	The total number of data path de-registration response messages discarded or denied due to admin prohibit. Triggers: Changes every time a data path de-registration response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4datapathderegsp-noresourcedrop	The total number of data path de-registration response messages discarded or denied due to resource unavailability. Triggers: Changes every time a data path de-registration response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4datapathderegsp-transiderr	The total number of data path deregistration response messages on the R4 interface with transaction ID errors.	Int32
r4keychadir-totsent	The total number of key change directive messages sent on the R4 interface.	Int32
r4keychadir-retranssent	The total number of key change directive messages re-transmitted on the R4 interface.	Int32
r4keychadir-totsendfail	The total number of failures occurred during transaction id generation and R4 Key Change Directive message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4keychadir-totrec	The total number of key changed directive messages received on the R4 interface.	Int32
r4keychadir-totacc	The total number of key change directive messages accepted on the R4 interface.	Int32
r4keychadir-totrelay	The total number of key change directive messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a key change directive message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4keychadir-totdenied	The total number of key change directive messages denied on the R4 interface.	Int32
r4keychadir-totdiscard	The total number of key change directive messages discarded on the R4 interface.	Int32
r4keychadir-badform	The total number of badly formed key change directive messages on the R4 interface.	Int32
r4keychadir-decodeerr	The total number of key change directive messages on the R4 interface with decode error.	Int32
r4keychadir-unspecerr	The total number of key change directive messages on the R4 interface with unspecified error.	Int32
r4keychadir-missmandtlv	The total number of key change directive messages on the R4 interface with missing mandatory TLVs.	Int32

Variables	Description	Data Type
r4keychadir-tlvvalinval	The total number of key change directive messages on the R4 interface with invalid TLV value.	Int32
r4keychadir-unknown_tlv	The total number of key change directive messages on the R4 interface with unknown TLVs.	Int32
r4keychadir-dup_tlv_found	The total number of key change directive messages on the R4 interface with duplicate TLVs.	Int32
r4keychadir-no_session_found	The total number of key change directive messages on the R4 interface without any session information.	Int32
r4keychadir-admin_prohibit	The total number of key change directive messages discarded or denied due to admin prohibit. Triggers: Changes every time a key change directive message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4keychadir-no_resource_drop	The total number of key change directive messages discarded or denied due to resource unavailability. Triggers: Changes every time a key change directive message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4keychadir-trans_id_err	The total number of key change directive messages on the R4 interface with transaction ID errors.	Int32
r4keychaack-tot_sent	The total number of key change acknowledgement messages sent on the R4 interface.	Int32
r4keychaack-retrans_sent	The total number of key change acknowledgement messages re-transmitted on the R4 interface.	Int32
r4keychaack-tot_send_fail	The total number of failures occurred during transaction id generation and R4 Key Change acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4keychaack-tot_rec	The total number of key change acknowledgement messages received on the R4 interface.	Int32
r4keychaack-tot_acc	The total number of key change acknowledgement messages accepted on the R4 interface.	Int32
r4keychaack-tot_relay	The total number of key change acknowledgement messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a key change acknowledgement message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4keychaack-tot_denied	The total number of key change acknowledgement messages denied on the R4 interface.	Int32
r4keychaack-tot_discard	The total number of key change acknowledgement messages discarded on the R4 interface.	Int32
r4keychaack-bad_form	The total number of badly formed key change acknowledgement messages on the R4 interface.	Int32
r4keychaack-decode_err	The total number of key change acknowledgement messages on the R4 interface with decode error.	Int32

Variables	Description	Data Type
r4keychaack-unspecerr	The total number of key change acknowledgement messages on the R4 interface with unspecified error.	Int32
r4keychaack-missmandtlv	The total number of key change acknowledgement messages on the R4 interface with missing mandatory TLVs.	Int32
r4keychaack-tlvvalinval	The total number of key change acknowledgement messages on the R4 interface with invalid TLV value.	Int32
r4keychaack-unknowntrlv	The total number of key change acknowledgement messages on the R4 interface with unknown TLVs.	Int32
r4keychaack-duptlvfound	The total number of key change acknowledgement messages on the R4 interface with duplicate TLVs.	Int32
r4keychaack-nosessfound	The total number of key change acknowledgement messages on the R4 interface without any session information.	Int32
r4keychaack-adminprohib	The total number of key change acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a key change acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4keychaack-noresourcedrop	The total number of key change acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a key change acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4keychaack-transiderr	The total number of key change acknowledgement messages on the R4 interface with transaction ID errors.	Int32
r4keychacnf-totrec	The total number of key change confirm messages received on the R4 interface.	Int32
r4keychacnf-totacc	The total number of key change confirm messages accepted on the R4 interface.	Int32
r4keychacnf-totrelay	The total number of key change confirm messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a key change confirm message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4keychacnf-totdenied	The total number of key change confirm messages denied on the R4 interface.	Int32
r4keychacnf-totdiscard	The total number of key change confirm messages discarded on the R4 interface.	Int32
r4keychacnf-badform	The total number of badly formed key change confirm messages on the R4 interface.	Int32
r4keychacnf-decodeerr	The total number of key change confirm messages on the R4 interface with decode error.	Int32
r4keychacnf-unspecerr	The total number of key change confirm messages on the R4 interface with unspecified error.	Int32
r4keychacnf-missmandtlv	The total number of key change confirm messages on the R4 interface with missing mandatory TLVs.	Int32

Variables	Description	Data Type
r4keychacnf-tlvvalinval	The total number of key change confirm messages on the R4 interface with invalid TLV value.	Int32
r4keychacnf-unknowntrlv	The total number of key change confirm messages on the R4 interface with unknown TLVs.	Int32
r4keychacnf-duptlvfound	The total number of key change confirm messages on the R4 interface with duplicate TLVs.	Int32
r4keychacnf-nosessfound	The total number of key change confirm messages on the R4 interface without any session information.	Int32
r4keychacnf-adminprohib	The total number of key change confirm messages discarded or denied due to admin prohibit. Triggers: Changes every time a key change confirm message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4keychacnf-noresourcedrop	The total number of key change confirm messages discarded or denied due to resource unavailability. Triggers: Changes every time a key change confirm message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4keychacnf-transiderr	The total number of key change confirm messages on the R4 interface with transaction ID errors.	Int32
r4cmackeycounupd-totsent	The total number of CMAC key count update messages sent on the R4 interface.	Int32
r4cmackeycounupd-retranssent	The total number of CMAC key count update messages re-transmitted on the R4 interface.	Int32
r4cmackeycounupd-totsendfail	The total number of failures occurred during transaction id generation and R4 CMAC key count update message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4cmackeycounupd-totrec	The total number of CMAC key count update messages received on the R4 interface.	Int32
r4cmackeycounupd-totacc	The total number of CMAC key count update messages accepted on the R4 interface.	Int32
r4cmackeycounupd-totrelay	The total number of CMAC key count update messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a CMAC key count update message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4cmackeycounupd-totdenied	The total number of CMAC key count update messages denied on the R4 interface.	Int32
r4cmackeycounupd-totdiscard	The total number of CMAC key count update messages discarded on the R4 interface.	Int32
r4cmackeycounupd-badform	The total number of badly formed CMAC key count update messages on the R4 interface.	Int32
r4cmackeycounupd-decodeerr	The total number of CMAC key count update messages on the R4 interface with decode error.	Int32

Variables	Description	Data Type
r4cmackeycounupd- unspecerr	The total number of CMAC key count update messages on the R4 interface with unspecified error.	Int32
r4cmackeycounupd- missmandtlv	The total number of CMAC key count update messages on the R4 interface with missing mandatory TLVs.	Int32
r4cmackeycounupd- tlvvalinval	The total number of CMAC key count update messages on the R4 interface with invalid TLV value.	Int32
r4cmackeycounupd- unknownnlv	The total number of CMAC key count update messages on the R4 interface with unknown TLVs.	Int32
r4cmackeycounupd- dupltlvfound	The total number of CMAC key count update messages on the R4 interface with duplicate TLVs.	Int32
r4cmackeycounupd- nosessfound	The total number of CMAC key count update messages on the R4 interface without any session information.	Int32
r4cmackeycounupd- adminprohib	The total number of CMAC key count update messages discarded or denied due to admin prohibit. Triggers: Changes every time a CMAC key count update message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4cmackeycounupd- noresource drop	The total number of CMAC key count update messages discarded or denied due to resource unavailability. Triggers: Changes every time a CMAC key count update message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4cmackeycounupd- transiderr	The total number of CMAC key count update messages on the R4 interface with transaction ID errors.	Int32
r4cmackeycounack- totsent	The total number of CMAC key count acknowledgement messages sent on the R4 interface.	Int32
r4cmackeycounack- retranssent	The total number of CMAC key count acknowledgement messages re-transmitted on the R4 interface.	Int32
r4cmackeycounack- totsendfail	The total number of failures occurred during transaction id generation and R4 CMAC key count acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4cmackeycounack- totrec	The total number of CMAC key count acknowledgement messages received on the R4 interface.	Int32
r4cmackeycounack- totacc	The total number of CMAC key count acknowledgement messages accepted on the R4 interface.	Int32
r4cmackeycounack- totrelay	The total number of CMAC key count acknowledgement messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time a CMAC key count acknowledgement message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4cmackeycounack- totdenied	The total number of CMAC key count acknowledgement messages denied on the R4 interface.	Int32

Variables	Description	Data Type
r4cmackeycounack-totdiscard	The total number of CMAC key count acknowledgement messages discarded on the R4 interface.	Int32
r4cmackeycounack-badform	The total number of badly formed CMAC key count acknowledgement messages on the R4 interface.	Int32
r4cmackeycounack-decodeerr	The total number of CMAC key count acknowledgement messages on the R4 interface with decode error.	Int32
r4cmackeycounack-unspecerr	The total number of CMAC key count acknowledgement messages on the R4 interface with unspecified error.	Int32
r4cmackeycounack-missmandtlv	The total number of CMAC key count acknowledgement messages on the R4 interface with missing mandatory TLVs.	Int32
r4cmackeycounack-tlvvalinval	The total number of CMAC key count acknowledgement messages on the R4 interface with invalid TLV value.	Int32
r4cmackeycounack-unknowntlv	The total number of CMAC key count acknowledgement messages on the R4 interface with unknown TLVs.	Int32
r4cmackeycounack-duptlvfound	The total number of CMAC key count acknowledgement messages on the R4 interface with duplicate TLVs.	Int32
r4cmackeycounack-nosessfound	The total number of CMAC key count acknowledgement messages on the R4 interface without any session information.	Int32
r4cmackeycounack-adminprohib	The total number of CMAC key count acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a CMAC key count acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4cmackeycounack-noresourcedrop	The total number of CMAC key count acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a CMAC key count acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4cmackeycounack-transiderr	The total number of CMAC key count acknowledgement messages on the R4 interface with transaction ID errors.	Int32
r4imentstachareq-totsent	The total number of R4 idle mode entry MS state change request messages sent on the R4 interface.	Int32
r4imentstachareq-retranssent	The total number of R4 idle mode entry MS state change request messages re-transmitted on the R4 interface.	Int32
r4imentstachareq-totsendfail	The total number of failures occurred during transaction id generation and R4 idle mode entry MS state change request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4imentstachareq-totrec	The total number of R4 idle mode entry MS state change request messages received on the R4 interface.	Int32
r4imentstachareq-totacc	The total number of R4 idle mode entry MS state change request messages accepted on the R4 interface.	Int32

Variables	Description	Data Type
r4imentstachareq-totrelay	The total number of R4 idle mode entry MS state change request messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 idle mode entry MS state change request message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4imentstachareq-totdenied	The total number of R4 idle mode entry MS state change request messages denied on the R4 interface.	Int32
r4imentstachareq-totdiscard	The total number of R4 idle mode entry MS state change request messages discarded on the R4 interface.	Int32
r4imentstachareq-badform	The total number of badly formed R4 idle mode entry MS state change request messages on the R4 interface.	Int32
r4imentstachareq-decodeerr	The total number of R4 idle mode entry MS state change request messages on the R4 interface with decode error.	Int32
r4imentstachareq-unspecerr	The total number of R4 idle mode entry MS state change request messages on the R4 interface with unspecified error.	Int32
r4imentstachareq-misssmandtlv	The total number of R4 idle mode entry MS state change request messages on the R4 interface with missing mandatory TLVs.	Int32
r4imentstachareq-tlvvalinval	The total number of R4 idle mode entry MS state change request messages on the R4 interface with invalid TLV value.	Int32
r4imentstachareq-unknowntrlv	The total number of R4 idle mode entry MS state change request messages on the R4 interface with unknown TLVs.	Int32
r4imentstachareq-duptlvfound	The total number of R4 idle mode entry MS state change request messages on the R4 interface with duplicate TLVs.	Int32
r4imentstachareq-nosessfound	The total number of R4 idle mode entry MS state change request messages on the R4 interface without any session information.	Int32
r4imentstachareq-adminprohib	The total number of R4 idle mode entry MS state change request messages discarded or denied due to admin prohibit. Triggers: Changes every time a R4 idle mode entry MS state change request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imentstachareq-noresourcedrop	The total number of R4 idle mode entry MS state change request messages discarded or denied due to resource unavailability. Triggers: Changes every time a R4 idle mode entry MS state change request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4imentstachareq-transiderr	The total number of R4 idle mode entry MS state change request messages on the R4 interface with transaction ID errors.	Int32
r4imentstacharsp-totsent	The total number of R4 idle mode entry MS state change response messages sent on the R4 interface.	Int32
r4imentstacharsp-retranssent	The total number of R4 idle mode entry MS state change response messages re-transmitted on the R4 interface.	Int32

Variables	Description	Data Type
r4imentstacharsp-totsendfail	The total number of failures occurred during transaction id generation and R4 idle mode entry MS state change response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4imentstacharsp-totrec	The total number of R4 idle mode entry MS state change response messages received on the R4 interface.	Int32
r4imentstacharsp-totacc	The total number of R4 idle mode entry MS state change response messages accepted on the R4 interface.	Int32
r4imentstacharsp-totrelay	The total number of R4 idle mode entry MS state change response messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 idle mode entry MS state change response message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4imentstacharsp-totdenied	The total number of R4 idle mode entry MS state change response messages denied on the R4 interface.	Int32
r4imentstacharsp-totdiscard	The total number of R4 idle mode entry MS state change response messages discarded on the R4 interface.	Int32
r4imentstacharsp-badform	The total number of badly formed R4 idle mode entry MS state change response messages on the R4 interface.	Int32
r4imentstacharsp-decodeerr	The total number of R4 idle mode entry MS state change response messages on the R4 interface with decode error.	Int32
r4imentstacharsp-unspecerr	The total number of R4 idle mode entry MS state change response messages on the R4 interface with unspecified error.	Int32
r4imentstacharsp-missmandtlv	The total number of R4 idle mode entry MS state change response messages on the R4 interface with missing mandatory TLVs.	Int32
r4imentstacharsp-tlvvalinval	The total number of R4 idle mode entry MS state change response messages on the R4 interface with invalid TLV value.	Int32
r4imentstacharsp-unknowntrlv	The total number of R4 idle mode entry MS state change response messages on the R4 interface with unknown TLVs.	Int32
r4imentstacharsp-duptlvfound	The total number of R4 idle mode entry MS state change response messages on the R4 interface with duplicate TLVs.	Int32
r4imentstacharsp-nosessfound	The total number of R4 idle mode entry MS state change response messages on the R4 interface without any session information.	Int32
r4imentstacharsp-adminprohib	The total number of R4 idle mode entry MS state change response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 idle mode entry MS state change response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imentstacharsp-noresourcedrop	The total number of R4 idle mode entry MS state change response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 idle mode entry MS state change response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32

Variables	Description	Data Type
r4imentstacharsp-transiderr	The total number of R4 idle mode entry MS state change response messages on the R4 interface with transaction ID errors.	Int32
r4imentstachaack-totsent	The total number of R4 idle mode entry state change acknowledgement messages sent on the R4 interface.	Int32
r4imentstachaack-retranssent	The total number of R4 idle mode entry state change acknowledgement messages re-transmitted on the R4 interface.	Int32
r4imentstachaack-totsendfail	The total number of failures occurred during transaction id generation and R4 idle mode entry state change acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4imentstachaack-totrec	The total number of R4 idle mode entry state change acknowledgement messages received on the R4 interface.	Int32
r4imentstachaack-totacc	The total number of R4 idle mode entry state change acknowledgement messages accepted on the R4 interface.	Int32
r4imentstachaack-totrelay	The total number of R4 idle mode entry state change acknowledgement messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 idle mode entry state change acknowledgement message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4imentstachaack-totdenied	The total number of R4 idle mode entry state change acknowledgement messages denied on the R4 interface.	Int32
r4imentstachaack-totdiscard	The total number of R4 idle mode entry state change acknowledgement messages discarded on the R4 interface.	Int32
r4imentstachaack-badform	The total number of badly formed R4 idle mode entry state change acknowledgement messages on the R4 interface.	Int32
r4imentstachaack-decodeerr	The total number of R4 idle mode entry state change acknowledgement messages on the R4 interface with decode error.	Int32
r4imentstachaack-unspecerr	The total number of R4 idle mode entry state change acknowledgement messages on the R4 interface with unspecified error.	Int32
r4imentstachaack-missmandtlv	The total number of R4 idle mode entry state change acknowledgement messages on the R4 interface with missing mandatory TLVs.	Int32
r4imentstachaack-tlvvalinval	The total number of R4 idle mode entry state change acknowledgement messages on the R4 interface with invalid TLV value.	Int32
r4imentstachaack-unknowntrlv	The total number of R4 idle mode entry state change acknowledgement messages on the R4 interface with unknown TLVs.	Int32
r4imentstachaack-duptlvfound	The total number of R4 idle mode entry state change acknowledgement messages on the R4 interface with duplicate TLVs.	Int32
r4imentstachaack-nosessfound	The total number of R4 idle mode entry state change acknowledgement messages on the R4 interface without any session information.	Int32

Variables	Description	Data Type
r4imentstachaack-adminprohib	The total number of R4 idle mode entry state change acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 idle mode entry state change acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imentstachaack-noresourcedrop	The total number of R4 idle mode entry state change acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 idle mode entry state change acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4imentstachaack-transiderr	The total number of R4 idle mode entry state change acknowledgement messages on the R4 interface with transaction ID errors.	Int32
r4anchorpcind-totsent	The total number of R4 anchor paging controller indicator messages sent on the R4 interface.	Int32
r4anchorpcind-retranssent	The total number of R4 anchor paging controller indicator messages re-transmitted on the R4 interface.	Int32
r4anchorpcind-totsendfail	The total number of failures occurred during transaction id generation and R4 anchor paging controller indicator message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4anchorpcind-totrec	The total number of R4 anchor paging controller indicator messages received on the R4 interface.	Int32
r4anchorpcind-totacc	The total number of R4 anchor paging controller indicator messages accepted on the R4 interface.	Int32
r4anchorpcind-totrelay	The total number of R4 anchor paging controller indicator messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 anchor paging controller indicator message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4anchorpcind-totdenied	The total number of R4 anchor paging controller indicator messages denied on the R4 interface.	Int32
r4anchorpcind-totdiscard	The total number of R4 anchor paging controller indicator messages discarded on the R4 interface.	Int32
r4anchorpcind-badform	The total number of badly formed R4 anchor paging controller indicator messages on the R4 interface.	Int32
r4anchorpcind-decodeerr	The total number of R4 anchor paging controller indicator messages on the R4 interface with decode error.	Int32
r4anchorpcind-unspecerr	The total number of R4 anchor paging controller indicator messages on the R4 interface with unspecified error.	Int32
r4anchorpcind-missmandtlv	The total number of R4 anchor paging controller indicator messages on the R4 interface with missing mandatory TLVs.	Int32
r4anchorpcind-tlvvalinval	The total number of R4 anchor paging controller indicator messages on the R4 interface with invalid TLV value.	Int32

Variables	Description	Data Type
r4anchorpcind-unknownctlv	The total number of R4 anchor paging controller indicator messages on the R4 interface with unknown TLVs.	Int32
r4anchorpcind-duptlvfound	The total number of R4 anchor paging controller indicator messages on the R4 interface with duplicate TLVs.	Int32
r4anchorpcind-nosessfound	The total number of R4 anchor paging controller indicator messages on the R4 interface without any session information.	Int32
r4anchorpcind-adminprohib	The total number of R4 anchor paging controller indicator messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 anchor paging controller indicator message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4anchorpcind-noresourcedrop	The total number of R4 anchor paging controller indicator messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 anchor paging controller indicator message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4anchorpcind-transiderr	The total number of R4 anchor paging controller indicator messages on the R4 interface with transaction ID errors.	Int32
r4anchorpack-totsent	The total number of R4 anchor paging controller acknowledgement messages sent on the R4 interface.	Int32
r4anchorpack-retranssent	The total number of R4 anchor paging controller acknowledgement messages re-transmitted on the R4 interface.	Int32
r4anchorpack-totsendfail	The total number of failures occurred during transaction id generation and R4 anchor paging controller acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4anchorpack-totrec	The total number of R4 anchor paging controller acknowledgement messages received on the R4 interface.	Int32
r4anchorpack-totacc	The total number of R4 anchor paging controller acknowledgement messages accepted on the R4 interface.	Int32
r4anchorpack-totrelay	The total number of R4 anchor paging controller acknowledgement messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 anchor paging controller acknowledgement message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4anchorpack-totdenied	The total number of R4 anchor paging controller acknowledgement messages denied on the R4 interface.	Int32
r4anchorpack-totdiscard	The total number of R4 anchor paging controller acknowledgement messages discarded on the R4 interface.	Int32
r4anchorpack-badform	The total number of badly formed R4 anchor paging controller acknowledgement messages on the R4 interface.	Int32
r4anchorpack-decodeerr	The total number of R4 anchor paging controller acknowledgement messages on the R4 interface with decode error.	Int32

Variables	Description	Data Type
r4anchorpcack-unspecerr	The total number of R4 anchor paging controller acknowledgement messages on the R4 interface with unspecified error.	Int32
r4anchorpcack-missmandtlv	The total number of R4 anchor paging controller acknowledgement messages on the R4 interface with missing mandatory TLVs.	Int32
r4anchorpcack-tlvvalinval	The total number of R4 anchor paging controller acknowledgement messages on the R4 interface with invalid TLV value.	Int32
r4anchorpcack-unknownltv	The total number of R4 anchor paging controller acknowledgement messages on the R4 interface with unknown TLVs.	Int32
r4anchorpcack-duptlvfound	The total number of R4 anchor paging controller acknowledgement messages on the R4 interface with duplicate TLVs.	Int32
r4anchorpcack-nosessfound	The total number of R4 anchor paging controller acknowledgement messages on the R4 interface without any session information.	Int32
r4anchorpcack-adminprohib	The total number of R4 anchor paging controller acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 anchor paging controller acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4anchorpcack-noresourcedrop	The total number of R4 anchor paging controller acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 anchor paging controller acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4anchorpcack-transiderr	The total number of R4 anchor paging controller acknowledgement messages on the R4 interface with transaction ID errors.	Int32
r4imexitstachareq-totsent	The total number of R4 idle mode exit MS state change request messages sent on the R4 interface.	Int32
r4imexitstachareq-retranssent	The total number of R4 idle mode exit MS state change request messages re-transmitted on the R4 interface.	Int32
r4imexitstachareq-totsendfail	The total number of failures occurred during transaction id generation and R4 idle mode exit MS state change request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4imexitstachareq-totrec	The total number of R4 idle mode exit MS state change request messages received on the R4 interface.	Int32
r4imexitstachareq-totacc	The total number of R4 idle mode exit MS state change request messages accepted on the R4 interface.	Int32
r4imexitstachareq-totrelay	The total number of R4 idle mode exit MS state change request messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 idle mode exit MS state change request message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4imexitstachareq-totdenied	The total number of R4 idle mode exit MS state change request messages denied on the R4 interface.	Int32

Variables	Description	Data Type
r4imexitstachareq-totdiscard	The total number of R4 idle mode exit MS state change request messages discarded on the R4 interface.	Int32
r4imexitstachareq-badfom	The total number of badly formed R4 idle mode exit MS state change request messages on the R4 interface.	Int32
r4imexitstachareq-decodeerr	The total number of R4 idle mode exit MS state change request messages on the R4 interface with decode error.	Int32
r4imexitstachareq-unspecerr	The total number of R4 idle mode exit MS state change request messages on the R4 interface with unspecified error.	Int32
r4imexitstachareq-missmandtlv	The total number of R4 idle mode exit MS state change request messages on the R4 interface with missing mandatory TLVs.	Int32
r4imexitstachareq-tlvvalinval	The total number of R4 idle mode exit MS state change request messages on the R4 interface with invalid TLV value.	Int32
r4imexitstachareq-unknowntlv	The total number of R4 idle mode exit MS state change request messages on the R4 interface with unknown TLVs.	Int32
r4imexitstachareq-duptlvfound	The total number of R4 idle mode exit MS state change request messages on the R4 interface with duplicate TLVs.	Int32
r4imexitstachareq-nosessfound	The total number of R4 idle mode exit MS state change request messages on the R4 interface without any session information.	Int32
r4imexitstachareq-adminprohib	The total number of R4 idle mode exit MS state change request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 idle mode exit MS state change request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imexitstachareq-noresourcedrop	The total number of R4 idle mode exit MS state change request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 idle mode exit MS state change request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4imexitstachareq-transiderr	The total number of R4 idle mode exit MS state change request messages on the R4 interface with transaction ID errors.	Int32
r4imexitstacharsp-totsent	The total number of R4 idle mode exit MS state change response messages sent on the R4 interface.	Int32
r4imexitstacharsp-retranssent	The total number of R4 idle mode exit MS state change response messages re-transmitted on the R4 interface.	Int32
r4imexitstacharsp-totsendfail	The total number of failures that occurred during transaction id generation and R4 idle mode exit MS state change response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4imexitstacharsp-totrec	The total number of R4 idle mode exit MS state change response messages received on the R4 interface.	Int32
r4imexitstacharsp-totacc	The total number of R4 idle mode exit MS state change response messages accepted on the R4 interface.	Int32

Variables	Description	Data Type
r4imexitstacharsp-totrelay	The total number of R4 idle mode exit MS state change response messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 idle mode exit MS state change response message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4imexitstacharsp-totdenied	The total number of R4 idle mode exit MS state change response messages denied on the R4 interface.	Int32
r4imexitstacharsp-totdiscard	The total number of R4 idle mode exit MS state change response messages discarded on the R4 interface.	Int32
r4imexitstacharsp-badform	The total number of badly formed R4 idle mode exit MS state change response messages on the R4 interface.	Int32
r4imexitstacharsp-decodeerr	The total number of R4 idle mode exit MS state change response messages on the R4 interface with decode error.	Int32
r4imexitstacharsp-unspecerr	The total number of R4 idle mode exit MS state change response messages on the R4 interface with unspecified error.	Int32
r4imexitstacharsp-missmandtlv	The total number of R4 idle mode exit MS state change response messages on the R4 interface with missing mandatory TLVs.	Int32
r4imexitstacharsp-tlvvalinval	The total number of R4 idle mode exit MS state change response messages on the R4 interface with invalid TLV value.	Int32
r4imexitstacharsp-unknowntrlv	The total number of R4 idle mode exit MS state change response messages on the R4 interface with unknown TLVs.	Int32
r4imexitstacharsp-duptlvfound	The total number of R4 idle mode exit MS state change response messages on the R4 interface with duplicate TLVs.	Int32
r4imexitstacharsp-nosessfound	The total number of R4 idle mode exit MS state change response messages on the R4 interface without any session information.	Int32
r4imexitstacharsp-adminprohib	The total number of R4 idle mode exit MS state change response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 idle mode exit MS state change response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imexitstacharsp-noresourcedrop	The total number of R4 idle mode exit MS state change response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 idle mode exit MS state change response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4imexitstacharsp-transiderr	The total number of R4 idle mode exit MS state change response messages on the R4 interface with transaction ID errors.	Int32
r4inipagreq-totsent	The total number of R4 initial paging request messages sent on the R4 interface.	Int32
r4inipagreq-retranssent	The total number of R4 initial paging request messages re-transmitted on the R4 interface.	Int32

Variables	Description	Data Type
r4inipagreq-totsendfail	The total number of failures occurred during transaction id generation and R4 initial paging request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4inipagreq-totrec	The total number of R4 initial paging request messages received on the R4 interface.	Int32
r4inipagreq-totacc	The total number of R4 initial paging request messages accepted on the R4 interface.	Int32
r4inipagreq-totrelay	The total number of R4 initial paging request messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 initial paging request message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4inipagreq-totdenied	The total number of R4 initial paging request messages denied on the R4 interface.	Int32
r4inipagreq-totdiscard	The total number of R4 initial paging request messages discarded on the R4 interface.	Int32
r4inipagreq-badform	The total number of badly formed R4 initial paging request messages on the R4 interface.	Int32
r4inipagreq-decodeerr	The total number of R4 initial paging request messages on the R4 interface with decode error.	Int32
r4inipagreq-unspecerr	The total number of R4 initial paging request messages on the R4 interface with unspecified error.	Int32
r4inipagreq-missmandtlv	The total number of R4 initial paging request messages on the R4 interface with missing mandatory TLVs.	Int32
r4inipagreq-tlvvalinval	The total number of R4 initial paging request messages on the R4 interface with invalid TLV value.	Int32
r4inipagreq-unknowntrlv	The total number of R4 initial paging request messages on the R4 interface with unknown TLVs.	Int32
r4inipagreq-duptlvfound	The total number of R4 initial paging request messages on the R4 interface with duplicate TLVs.	Int32
r4inipagreq-nosessfound	The total number of R4 initial paging request messages on the R4 interface without any session information.	Int32
r4inipagreq-adminprohib	The total number of R4 initial paging request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 initial paging request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4inipagreq-noresourcefound	The total number of R4 initial paging request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 initial paging request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4inipagreq-transiderr	The total number of R4 initial paging request messages on the R4 interface with transaction ID errors.	Int32
r4inipagrsp-totsent	The total number of R4 initial paging response messages sent on the R4 interface.	Int32

Variables	Description	Data Type
r4inipagrsp-retranssent	The total number of R4 initial paging response messages re-transmitted on the R4 interface.	Int32
r4inipagrsp-totsendfail	The total number of failures occurred during transaction id generation and R4 initial paging response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4inipagrsp-totrec	The total number of R4 initial paging response messages received on the R4 interface.	Int32
r4inipagrsp-totacc	The total number of R4 initial paging response messages accepted on the R4 interface.	Int32
r4inipagrsp-totrelay	The total number of R4 initial paging response messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 initial paging response message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4inipagrsp-totdenied	The total number of R4 initial paging response messages denied on the R4 interface.	Int32
r4inipagrsp-totdiscard	The total number of R4 initial paging response messages discarded on the R4 interface.	Int32
r4inipagrsp-badform	The total number of badly formed R4 initial paging response messages on the R4 interface.	Int32
r4inipagrsp-decodeerr	The total number of R4 initial paging response messages on the R4 interface with decode error.	Int32
r4inipagrsp-unspecerr	The total number of R4 initial paging response messages on the R4 interface with unspecified error.	Int32
r4inipagrsp-missmandtlv	The total number of R4 initial paging response messages on the R4 interface with missing mandatory TLVs.	Int32
r4inipagrsp-tlvvalinval	The total number of R4 initial paging response messages on the R4 interface with invalid TLV value.	Int32
r4inipagrsp-unknowntrlv	The total number of R4 initial paging response messages on the R4 interface with unknown TLVs.	Int32
r4inipagrsp-duptlvfound	The total number of R4 initial paging response messages on the R4 interface with duplicate TLVs.	Int32
r4inipagrsp-nosessfound	The total number of R4 initial paging response messages on the R4 interface without any session information.	Int32
r4inipagrsp-adminprohib	The total number of R4 initial paging response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 initial paging response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4inipagrsp-noresourcedrop	The total number of R4 initial paging response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 initial paging response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32

Variables	Description	Data Type
r4inipagrsp-transiderr	The total number of R4 initial paging response messages on the R4 interface with transaction ID errors.	Int32
r4delmsentreq-totsent	The total number of R4 delete MS entry request messages sent on the R4 interface.	Int32
r4delmsentreq-retranssent	The total number of R4 delete MS entry request messages re-transmitted on the R4 interface.	Int32
r4delmsentreq-totsendfail	The total number of failures occurred during transaction id generation and R4 delete MS entry request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4delmsentreq-totrec	The total number of R4 delete MS entry request messages received on the R4 interface.	Int32
r4delmsentreq-totacc	The total number of R4 delete MS entry request messages accepted on the R4 interface.	Int32
r4delmsentreq-totrelay	The total number of R4 delete MS entry request messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 delete MS entry request message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4delmsentreq-totdenied	The total number of R4 delete MS entry request messages denied on the R4 interface.	Int32
r4delmsentreq-totdiscard	The total number of R4 delete MS entry request messages discarded on the R4 interface.	Int32
r4delmsentreq-badform	The total number of badly formed R4 delete MS entry request messages on the R4 interface.	Int32
r4delmsentreq-decodeerr	The total number of R4 delete MS entry request messages on the R4 interface with decode error.	Int32
r4delmsentreq-unspecerr	The total number of R4 delete MS entry request messages on the R4 interface with unspecified error.	Int32
r4delmsentreq-missmandtlv	The total number of R4 delete MS entry request messages on the R4 interface with missing mandatory TLVs.	Int32
r4delmsentreq-tlvvalinval	The total number of R4 delete MS entry request messages on the R4 interface with invalid TLV value.	Int32
r4delmsentreq-unknowntrlv	The total number of R4 delete MS entry request messages on the R4 interface with unknown TLVs.	Int32
r4delmsentreq-duptlvfound	The total number of R4 delete MS entry request messages on the R4 interface with duplicate TLVs.	Int32
r4delmsentreq-nosessfound	The total number of R4 delete MS entry request messages on the R4 interface without any session information.	Int32
r4delmsentreq-adminprohib	The total number of R4 delete MS entry request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 delete MS entry request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r4delmsentreq-noresourcedrop	The total number of R4 delete MS entry request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 delete MS entry request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4delmsentreq-transiderr	The total number of R4 delete MS entry request messages on the R4 interface with transaction ID errors.	Int32
r4delmsentrsp-totsent	The total number of R4 delete MS entry response messages sent on the R4 interface.	Int32
r4delmsentrsp-retranssent	The total number of R4 delete MS entry response messages re-transmitted on the R4 interface.	Int32
r4delmsentrsp-totsendfail	The total number of failures occurred during transaction id generation and R4 delete MS entry response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4delmsentrsp-to trec	The total number of R4 delete MS entry response messages received on the R4 interface.	Int32
r4delmsentrsp-to racc	The total number of R4 delete MS entry response messages accepted on the R4 interface.	Int32
r4delmsentrsp-to relay	The total number of R4 delete MS entry response messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 delete MS entry response message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4delmsentrsp-to denied	The total number of R4 delete MS entry response messages denied on the R4 interface.	Int32
r4delmsentrsp-to discard	The total number of R4 delete MS entry response messages discarded on the R4 interface.	Int32
r4delmsentrsp-badform	The total number of badly formed R4 delete MS entry response messages on the R4 interface.	Int32
r4delmsentrsp-decodeerr	The total number of R4 delete MS entry response messages on the R4 interface with decode error.	Int32
r4delmsentrsp-unspecerr	The total number of R4 delete MS entry response messages on the R4 interface with unspecified error.	Int32
r4delmsentrsp-missmandtlv	The total number of R4 delete MS entry response messages on the R4 interface with missing mandatory TLVs.	Int32
r4delmsentrsp-tlvvalinval	The total number of R4 delete MS entry response messages on the R4 interface with invalid TLV value.	Int32
r4delmsentrsp-unknown tlv	The total number of R4 delete MS entry response messages on the R4 interface with unknown TLVs.	Int32
r4delmsentrsp-duptlvfound	The total number of R4 delete MS entry response messages on the R4 interface with duplicate TLVs.	Int32
r4delmsentrsp-nosessfound	The total number of R4 delete MS entry response messages on the R4 interface without any session information.	Int32

Variables	Description	Data Type
r4delmsentrsp-adminprohib	The total number of R4 delete MS entry response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 delete MS entry response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4delmsentrsp-noresourcedrop	The total number of R4 delete MS entry response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 delete MS entry response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4delmsentrsp-transiderr	The total number of R4 delete MS entry response messages on the R4 interface with transaction ID errors.	Int32
r4horeq-totsent	The total number of R4 handover request messages sent on the R4 interface.	Int32
r4horeq-retranssent	The total number of R4 handover request messages re-transmitted on the R4 interface.	Int32
r4horeq-totsendfail	The total number of failures occurred during transaction id generation and R4 handover request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4horeq-totrec	The total number of R4 handover request messages received on the R4 interface.	Int32
r4horeq-totacc	The total number of R4 handover request messages accepted on the R4 interface.	Int32
r4horeq-totrelay	The total number of R4 handover request messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 handover request message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4horeq-totdenied	The total number of R4 handover request messages denied on the R4 interface.	Int32
r4horeq-totdiscard	The total number of R4 handover request messages discarded on the R4 interface.	Int32
r4horeq-badform	The total number of badly formed R4 handover request messages on the R4 interface.	Int32
r4horeq-decodeerr	The total number of R4 handover request messages on the R4 interface with decode error.	Int32
r4horeq-unspecerr	The total number of R4 handover request messages on the R4 interface with unspecified error.	Int32
r4horeq-misssmandtlv	The total number of R4 handover request messages on the R4 interface with missing mandatory TLVs.	Int32
r4horeq-tlvvalinval	The total number of R4 handover request messages on the R4 interface with invalid TLV value.	Int32
r4horeq-unknownltlv	The total number of R4 handover request messages on the R4 interface with unknown TLVs.	Int32
r4horeq-duptlvfound	The total number of R4 handover request messages on the R4 interface with duplicate TLVs.	Int32
r4horeq-nosessfound	The total number of R4 handover request messages on the R4 interface without any session information.	Int32

Variables	Description	Data Type
r4horeq-adminprohib	The total number of R4 handover request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 handover request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4horeq-noresourcedrop	The total number of R4 handover request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 handover request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4horeq-transiderr	The total number of R4 handover request messages on the R4 interface with transaction ID errors.	Int32
r4horsp-totsent	The total number of R4 handover response messages sent on the R4 interface.	Int32
r4horsp-retranssent	The total number of R4 handover response messages re-transmitted on the R4 interface.	Int32
r4horsp-totsendfail	The total number of failures occurred during transaction id generation and R4 handover response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4horsp-totrec	The total number of R4 handover response messages received on the R4 interface.	Int32
r4horsp-totacc	The total number of R4 handover response messages accepted on the R4 interface.	Int32
r4horsp-totrelay	The total number of R4 handover request messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 handover request message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4horsp-totdenied	The total number of R4 handover response messages denied on the R4 interface.	Int32
r4horsp-totdiscard	The total number of R4 handover response messages discarded on the R4 interface.	Int32
r4horsp-badform	The total number of badly formed R4 handover response messages on the R4 interface.	Int32
r4horsp-decodeerr	The total number of R4 handover response messages on the R4 interface with decode error.	Int32
r4horsp-unspecerr	The total number of R4 handover response messages on the R4 interface with unspecified error.	Int32
r4horsp-mismandtlv	The total number of R4 handover response messages on the R4 interface with missing mandatory TLVs.	Int32
r4horsp-tlvvalinval	The total number of R4 handover response messages on the R4 interface with invalid TLV value.	Int32
r4horsp-unknowntrlv	The total number of R4 handover response messages on the R4 interface with unknown TLVs.	Int32
r4horsp-duptlvfound	The total number of R4 handover response messages on the R4 interface with duplicate TLVs.	Int32

Variables	Description	Data Type
r4horsp-nosessfound	The total number of R4 handover response messages on the R4 interface without any session information.	Int32
r4horsp-adminprohib	The total number of R4 handover response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 handover response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4horsp-noresourcedrop	The total number of R4 handover response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 handover response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4horsp-transiderr	The total number of R4 handover response messages on the R4 interface with transaction ID errors.	Int32
r4hoack-totsent	The total number of R4 handover acknowledgement messages sent on the R4 interface.	Int32
r4hoack-retranssent	The total number of R4 handover acknowledgement messages re-transmitted on the R4 interface.	Int32
r4hoack-totsendfail	The total number of failures occurred during transaction id generation and R4 handover acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4hoack-totrec	The total number of R4 handover acknowledgement messages received on the R4 interface.	Int32
r4hoack-totacc	The total number of R4 handover acknowledgement messages accepted on the R4 interface.	Int32
r4hoack-totrelay	The total number of R4 handover acknowledgement messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 handover acknowledgement message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4hoack-totdenied	The total number of R4 handover acknowledgement messages denied on the R4 interface.	Int32
r4hoack-totdiscard	The total number of R4 handover acknowledgement messages discarded on the R4 interface.	Int32
r4hoack-badform	The total number of badly formed R4 handover acknowledgement messages on the R4 interface.	Int32
r4hoack-decodeerr	The total number of R4 handover acknowledgement messages on the R4 interface with decode error.	Int32
r4hoack-unspecerr	The total number of R4 handover acknowledgement messages on the R4 interface with unspecified error.	Int32
r4hoack-missmandtlv	The total number of R4 handover acknowledgement messages on the R4 interface with missing mandatory TLVs.	Int32

Variables	Description	Data Type
r4hoack-tlvvalinval	The total number of R4 handover acknowledgement messages on the R4 interface with invalid TLV value.	Int32
r4hoack-unknowntlv	The total number of R4 handover acknowledgement messages on the R4 interface with unknown TLVs.	Int32
r4hoack-duptlvfound	The total number of R4 handover acknowledgement messages on the R4 interface with duplicate TLVs.	Int32
r4hoack-nosessfound	The total number of R4 handover acknowledgement messages on the R4 interface without any session information.	Int32
r4hoack-adminprohib	The total number of R4 handover acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 handover acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4hoack-noresourcedrop	The total number of R4 handover acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 handover acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4hoack-transiderr	The total number of R4 handover acknowledgement messages on the R4 interface with transaction ID errors.	Int32
r4hocnf-totsent	The total number of R4 handover confirm messages sent on the R4 interface.	Int32
r4hocnf-retranssent	The total number of R4 handover confirm messages re-transmitted on the R4 interface.	Int32
r4hocnf-totsefail	The total number of failures occurred during transaction id generation and R4 handover confirm message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4hocnf-totrec	The total number of R4 handover confirm messages received on the R4 interface.	Int32
r4hocnf-totacc	The total number of R4 handover confirm messages accepted on the R4 interface.	Int32
r4hocnf-totrelay	The total number of R4 handover confirm messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 handover confirm message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4hocnf-totdenied	The total number of R4 handover confirm messages denied on the R4 interface.	Int32
r4hocnf-totdiscard	The total number of R4 handover confirm messages discarded on the R4 interface.	Int32
r4hocnf-badform	The total number of badly formed R4 handover confirm messages on the R4 interface.	Int32
r4hocnf-decodeerr	The total number of R4 handover confirm messages on the R4 interface with decode error.	Int32
r4hocnf-unspecerr	The total number of R4 handover confirm messages on the R4 interface with unspecified error.	Int32
r4hocnf-missmandtlv	The total number of R4 handover confirm messages on the R4 interface with missing mandatory TLVs.	Int32

Variables	Description	Data Type
r4hocnf-tlvvalinval	The total number of R4 handover confirm messages on the R4 interface with invalid TLV value.	Int32
r4hocnf-unknowntrlv	The total number of R4 handover confirm messages on the R4 interface with unknown TLVs.	Int32
r4hocnf-duptlvfound	The total number of R4 handover confirm messages on the R4 interface with duplicate TLVs.	Int32
r4hocnf-nosessfound	The total number of R4 handover confirm messages on the R4 interface without any session information.	Int32
r4hocnf-adminprohib	The total number of R4 handover confirm messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 handover confirm message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4hocnf-noresourcedrop	The total number of R4 handover confirm messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 handover confirm message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4hocnf-transiderr	The total number of R4 handover confirm messages on the R4 interface with transaction ID errors.	Int32
r4hocmpl-totsent	The total number of R4 handover complete messages sent on the R4 interface.	Int32
r4hocmpl-retranssent	The total number of R4 handover complete messages re-transmitted on the R4 interface.	Int32
r4hocmpl-totsefail	The total number of failures occurred during transaction id generation and R4 handover complete message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4hocmpl-totrec	The total number of R4 handover complete messages received on the R4 interface.	Int32
r4hocmpl-totacc	The total number of R4 handover complete messages accepted on the R4 interface.	Int32
r4hocmpl-totrelay	The total number of R4 handover complete messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 handover complete message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4hocmpl-totdenied	The total number of R4 handover complete messages denied on the R4 interface.	Int32
r4hocmpl-totdiscard	The total number of R4 handover complete messages discarded on the R4 interface.	Int32
r4hocmpl-badform	The total number of badly formed R4 handover complete messages on the R4 interface.	Int32
r4hocmpl-decodeerr	The total number of R4 handover complete messages on the R4 interface with decode error.	Int32
r4hocmpl-unspecerr	The total number of R4 handover complete messages on the R4 interface with unspecified error.	Int32

Variables	Description	Data Type
r4hocmpl-missmandtlv	The total number of R4 handover complete messages on the R4 interface with missing mandatory TLVs.	Int32
r4hocmpl-tlvvalinval	The total number of R4 handover complete messages on the R4 interface with invalid TLV value.	Int32
r4hocmpl-unknowntrlv	The total number of R4 handover complete messages on the R4 interface with unknown TLVs.	Int32
r4hocmpl-duptlvfound	The total number of R4 handover complete messages on the R4 interface with duplicate TLVs.	Int32
r4hocmpl-nosessfound	The total number of R4 handover complete messages on the R4 interface without any session information.	Int32
r4hocmpl-adminprohib	The total number of R4 handover complete messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 handover complete message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4hocmpl-noresourcedrop	The total number of R4 handover complete messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 handover complete message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4hocmpl-transiderr	The total number of R4 handover complete messages on the the R4 interface with transaction ID errors.	Int32
r4unknown-totrec	The total number of unknown messages sent on the R4 interface.	Int32
r4unknown-totacc	The total number of unknown messages re-transmitted on the R4 interface.	Int32
r4unknown-totrelay	The total number of R4 unknown messages received from the base station and relayed on the the R4 interface. Triggers: Changes every time an R4 unknown message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4unknown-totdenied	The total number of unknown denied messages received on the R4 interface.	Int32
r4unknown-totdiscard	The total number of unknown discarded messages accepted on the R4 interface.	Int32
r4unknown-badform	The total number of unknown badly formed messages on the R4 interface.	Int32
r4unknown-decodeerr	The total number of unknown messages discarded on the R4 interface.	Int32
r4unknown-unspecerr	The total number of unknown unspecified error messages on the R4 interface.	Int32
r4unknown-missmandtlv	The total number of unknown messages on the R4 interface with missing mandatory TLV.	Int32
r4unknown-tlvvalinval	The total number of unknown messages on the R4 interface with an invalid TLV.	Int32
r4unknown-unknowntrlv	The total number of unknown messages on the R4 interface with unknown TLVs.	Int32
r4unknown-duptlvfound	The total number of messages on the R4 interface with duplicate TLV values.	Int32
r4unknown-nosessfound	The total number of messages on the R4 interface with no session information.	Int32

Variables	Description	Data Type
r4unknown-adminprohib	The total number of R4 unknown messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 unknown message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4unknown-noresourcedrop	The total number of R4 unknown messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 unknown message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4unknown-transiderr	The total number of unknown messages on the R4 interface with transaction ID errors.	Int32
r4datagrerec-totpackrec	The total number of data packets received through the GRE tunnel on the R4 interface.	Int32
r4datagrerec-protyperror	Total number of protected type errors received through the GRE tunnel the R4 interface.	Int32
r4datagrerec-totbytrec	The total number of data bytes received through the GRE tunnel the R4 interface.	Int32
r4datagrerec-grekeyabs	The total number of data message received without the GRE key through GRE tunnel the R4 interface.	Int32
r4datagrerec-grechker	The total number of data message received with checksum error through the GRE tunnel the R4 interface.	Int32
r4datagrerec-invpacklen	Total number of protectd type errors received through the GRE tunnel the R4 interface.	Int32
r4datagrerec-nosessfou	The total number of data bytes received through the GRE tunnel the R4 interface.	Int32
r4datagrerec-unspecerr	The total number of data message received without a GRE key through the GRE tunnel the R4 interface.	Int32
r4pcrelocind-totsent	The total number of R4 PC Relocation Indication messages sent to the ASNPC.	Int32
r4pcrelocind-retranssent	The total number of PC Relocation Indication messages retransmitted on the the R4 interface to the ASNPC.	Int32
r4pcrelocind-totsendfail	The total number of PC Relocation Indication message failures received from the ASNPC and relayed on the the R4 interface. This counter is used to count the error while sending the R4 packets.	Int32
r4pcrelocind-totrec	The total number of R4 PC Relocation Indication messages received by the ASNPC.	Int32
r4pcrelocind-totacc	The total number of R4 PC Relocation Indication messages accepted by the ASNPC.	Int32
r4pcrelocind-totrelay	The total number of R4 PC Relocation Indication messages sent to the ASNPC and relayed on the R6 interface. Triggers: Changes every time an R4 PC Relocation Indication message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32
r4pcrelocind-totdenied	The total number of PC Relocation Indication messages denied on the the R4 interface.	Int32
r4pcrelocind-totdiscard	The total number of PC Relocation Indication messages discarded on the the R4 interface.	Int32
r4pcrelocind-badform	The total number of badly formed R4 PC Relocation Indication messages sent to the ASNPC.	Int32

Variables	Description	Data Type
r4pcrelocind-decodeerr	The total number of R4 PC Relocation Indication messages sent to the ASNPC with decode errors.	Int32
r4pcrelocind-unspecerr	The total number of R4 PC Relocation Indication messages sent to the ASNPC with unspecified errors.	Int32
r4pcrelocind-missmandtlv	The total number of R4 PC Relocation Indication messages sent to the ASNPC with missing mandatory TLVs.	Int32
r4pcrelocind-tlvvalinval	The total number of R4 PC Relocation Indication messages sent to the ASNPC with an invalid TLV.	Int32
r4pcrelocind-unknowntrlv	The total number of R4 PC Relocation Indication messages sent to the ASNPC with an unknown TLV.	Int32
r4pcrelocind-duptlvfound	The total number of R4 PC Relocation Indication messages sent to the ASNPC with duplicate TLVs.	Int32
r4pcrelocind-nosessfound	The total number of R4 PC Relocation Indication messages sent to the ASNPC without any session information.	Int32
r4pcrelocind-admprohibit	The total number of R4 PC Relocation Indication messages sent to the ASNPC that were discarded or denied due to admin prohibit. Triggers: Changes every time an R4 PC Relocation Indication message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4pcrelocind-noresourcedrop	The total number of R4 PC Relocation Indication messages sent to the ASNPC that were discarded or denied due to resource unavailability. Triggers: Changes every time an R4 PC Relocation Indication message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r4pcrelocind-transiderr	The total number of R4 PC Relocation Indication messages sent to the ASNPC with a transaction ID error.	Int32
r4imexitstaind-totsent	The total number of Idle Mode Exit State Indication messages sent to the peer ASNGW.	Int32
r4imexitstaind-retranssent	The total number of Idle Mode Exit State Indication messages retransmitted on the the R4 interface to the peer ASNGW.	Int32
r4imexitstaind-totsendfail	The total number of Idle Mode Exit State Indication message failures received from the peer ASNGW and relayed on the the R4 interface. This counter is used to count the error while sending the R4 packets.	Int 32
r4imexitstaind-totrec	The total number of R4 Idle Mode Exit State Indication messages received by the peer ASNGW.	Int32
r4imexitstaind-totacc	The total number of R4 Idle Mode Exit State Indication messages accepted by the peer ASNGW.	Int32
r4imexitstaind-totrelay	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNPC and relayed on the R6 interface. Triggers: Changes every time an R4 Idle Mode Exit State Indication message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r4imexitstaind-totdenied	The total number of Idle Mode Exit State Indication messages to the peer ASNGW that were denied on the the R4 interface.	Int32
r4imexitstaind-totdiscard	The total number of Idle Mode Exit State Indication messages sent to the peer ASNGW that were discarded on the the R4 interface.	Int32
r4imexitstaind-badform	The total number of badly formed R4 Idle Mode Exit State Indication messages sent to the peer ASNGW.	Int32
r4imexitstaind-decodeerr	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW with decode errors.	Int32
r4imexitstaind-unspeccerr	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW with unspecified errors.	Int32
r4imexitstaind-missmandtlv	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW with missing mandatory TLVs.	Int32
r4imexitstaind-tlvvalinval	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW with an invalid TLV.	Int32
r4imexitstaind-unknownctlv	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW with an unknown TLV.	Int32
r4imexitstaind-dupltlvfound	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW with duplicate TLVs.	Int32
r4imexitstaind-nosessfound	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW without any session information.	Int32
r4imexitstaind-admprohibit	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW that were discarded or denied due to admin prohibit. Triggers: Changes every time an Idle Mode Exit State Indication message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imexitstaind-noresourcedrop	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW that were discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Idle Mode Exit State Indication message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r4imexitstaind-transiderr	The total number of R4 Idle Mode Exit State Indication messages sent to the peer ASNGW with a transaction ID error.	Int32
r4pcrelocack-totsent	The number of PC Relocation Acknowledgement messages sent to the ASNPC.	Int32
r4pcrelocack-retranssent	The total number of PC Relocation Acknowledgement messages retransmitted on the the R4 interface to the ASNPC.	Int32
r4pcrelocack-totsendfail	The total number of PC Relocation Acknowledgement message failures sent to the ASNPC and relayed on the the R4 interface. This counter is used to count the error while sending the R4 packets.	Int32
r4pcrelocack-totrec	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC.	Int32
r4pcrelocack-totacc	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC.	Int32

Variables	Description	Data Type
r4pcrelocack-totrelay	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC and relayed on the the R4 interface. Triggers: Changes every time an R4 Idle Mode Exit State Indication message is relayed by the the R4 interface. Availability: across all ASNGW services.	Int 32
r4pcrelocack-totdenied	The total number of PC Relocation Acknowledgement messages sent to the ASNPC that were denied on the the R4 interface.	Int32
r4pcrelocack-totdiscard	The total number of PC Relocation Acknowledgement messages sent to the ASNPC that were discarded on the the R4 interface.	Int32
r4pcrelocack-badform	The total number of badly formed R4 PC Relocation Acknowledgement messages sent to the ASNPC.	Int32
r4pcrelocack-decodeerr	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC with decode errors.	Int32
r4pcrelocack-unspecerr	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC with unspecified errors.	Int32
r4pcrelocack-missmandtlv	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC with missing mandatory TLVs.	Int32
r4pcrelocack-tlvvalinval	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC with an invalid TLV.	Int32
r4pcrelocack-unknowntrlv	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC with an unknown TLV.	Int32
r4pcrelocack-duptlvfound	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC with duplicate TLVs.	Int32
r4pcrelocack-nosessfound	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC without any session information.	Int32
r4pcrelocack-admprohibit	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC that were discarded or denied due to admin prohibit. Triggers: Changes every time an R4 PC Relocation Acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4pcrelocack-noresourcedrop	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNPC that were discarded or denied due to resource unavailability. Triggers: Changes every time an R4 PC Relocation Acknowledgement message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r4pcrelocack-transiderr	The total number of R4 IPC Relocation Acknowledgement messages sent to the ASNPC with a transaction ID error.	Int32
r4imexitstaindack-totsent	The total number of Idle Mode Exit State Indication Acknowledgement messages sent to the peer ASNGW.	Int32
r4imexitstaindack-retranssent	The total number of Idle Mode Exit State Indication Acknowledgement messages retransmitted on the the R4 interface to the peer ASNGW.	Int32

Variables	Description	Data Type
r4imexitstaindack-totsendfail	The total number of Idle Mode Exit State Indication Acknowledgement message sent to the peer ASNGW that failed.	Int32
r4imexitstaindack-totrec	The total number of Idle Mode Exit State Indication Acknowledgement messages received on the the R4 interface to the peer ASNGW.	Int32
r4imexitstaindack-totacc	The total number of accepted Idle Mode Exit State Indication Acknowledgement messages sent to the peer ASNGW.	Int32
r4imexitstaindack-totrelay	The total number of Idle Mode Exit State Indication Acknowledgement messages relayed on the the R4 interface to the peer ASNGW.	Int32
r4imexitstaindack-totdenied	The total number of denied Idle Mode Exit State Indication Acknowledgement messages sent to the peer ASNGW.	Int32
r4imexitstaindack-totdiscard	The total number of discarded Idle Mode Exit State Indication Acknowledgement messages sent on the the R4 interface to the peer ASNGW.	Int32
r4imexitstaindack-badfom	The total number of badly formed Idle Mode Exit State Indication Acknowledgement messages sent to the peer ASNG	Int32
r4imexitstaindack-decodeerr	The total number of Idle Mode Exit State Indication Acknowledgement messages retransmitted on the the R4 interface to the peer ASNGW with decode errors.	Int32
r4imexitstaindack-unspecerr	The total number of Idle Mode Exit State Indication messages sent to the peer ASNGW on the the R4 interface with unspecified errors.	Int32
r4imexitstaindack-missmandtlv	The total number of Idle Mode Exit State Acknowledgement Indication messages sent to the peer ASNGW with missing mandatory TLVs..	Int32
r4imexitstaindack-tlvvalinval	The total number of Idle Mode Exit State Acknowledgement Indication messages sent to the peer ASNGW with an invalid TLV.	Int32
r4imexitstaindack-unknowntrlv	The total number of Idle Mode Exit State Acknowledgement Indication messages with an unknown TLV sent to the peer ASNGW on the the R4 interface.	Int32
r4imexitstaindack-duptrlvfound	The total number of Idle Mode Exit State Acknowledgement Indication messages with duplicate TLVs sent to the peer ASNGW over the the R4 interface.	Int32
r4imexitstaindack-nosessfound	The total number of Idle Mode Exit State Acknowledgement Indication messages sent to the peer ASNGW over the the R4 interface with no session information.	Int32
r4imexitstaindack-admprohibit	The total number of Idle Mode Exit State Indication Acknowledgement messages sent on the the R4 interface to the peer ASNGW discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Idle Mode Exit State Indication message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imexitstaindack-noresourcedrop	The total number of Idle Mode Exit State Indication Acknowledgement messages sent to the peer ASNGW on the the R4 interface that were discarded or denied due to resource unavailability. Triggers: Changes every time an Idle Mode Exit State Indication Acknowledgement message is discarded or denied due to resource unavailability. This counter is used to count the error while sending the R4 packets.	Int 32
r4imexitstaindack-transiderr	The total number of R4 Idle Mode Exit State Indication Acknowledgement messages sent to the peer ASNGW on the the R4 interface with transaction errors.	Int32

Variables	Description	Data Type
r4datapathderegack-totsent	The total number of Data Path Deregistration Acknowledgement messages sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-retranssent	The total number retransmitted Data Path Deregistration Acknowledgement messages sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-totsendfail	The total number of failed Data Path Deregistration Acknowledgement messages sent on the the R4 interface to the peer ASNGW.	Int32
r4datapathderegack-totrec	The total number of received Data Path Deregistration Acknowledgement messages sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-totacc	The total number of accepted Data Path Deregistration Acknowledgement messages sent on the the R4 interface to the peer ASNGW.	Int32
r4datapathderegack-totrelay	The total number of relayed Data Path Deregistration Acknowledgement messages sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-totdenied	The total number of denied Data Path Deregistration Acknowledgement messages sent on the the R4 interface to the peer ASNGW.	Int32
r4datapathderegack-totdiscard	The total number of discarded Data Path Deregistration Acknowledgement messages sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-badform	The total number of badly formed Data Path Deregistration Acknowledgement messages sent to the peer ASNGW on the the R4 interface. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathderegack-decodeerr	The total number of Data Path Deregistration Acknowledgement messages sent to the peer ASNGW with decode errors.	Int32
r4datapathderegack-unspecerr	The total number of Data Path Deregistration Acknowledgement messages with unspecified errors sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-missmandtlv	The total number of Data Path Deregistration Acknowledgement messages with missing mandatory TLVs sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-tlvvalinval	The total number of Data Path Deregistration Acknowledgement messages with invalid TLVs sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-unknownnltlv	The total number of Data Path Deregistration Acknowledgement messages with unknown TLVs sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-duptlvfound	The total number of Data Path Deregistration Acknowledgement messages with duplicate TLVs sent to the peer ASNGW on the the R4 interface.	Int32
r4datapathderegack-nosessfound	The total number of Data Path Deregistration Acknowledgement messages sent to the peer ASNGW over the the R4 interface with no session information.	Int32
r4datapathderegack-admprohibit	The total number of Data Path Deregistration Acknowledgement messages sent on the the R4 interface to the peer ASNGW discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Data Path Deregistration Acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r4datapathderegack-noresourcedrop	The total number of Data Path Deregistration Acknowledgement messages sent to the peer ASNGW on the the R4 interface that were discarded or denied due to resource unavailability. Triggers: Changes every time an Data Path Deregistration Acknowledgement message is discarded or denied due to resource unavailability. This counter is used to count the error while sending the R4 packets.	Int32
r4datapathderegack-transiderr	The total number of R4 Data Path Deregistration Acknowledgement messages sent to the peer ASNGW on the the R4 interface with transaction ID errors.	Int32
r6keepalivereq-totsent	The total number of R6 Keep-alive Request messages sent to the base station.	Int32
r6keepalivereq-retranssent	The total number of Keep-alive Request messages retransmitted on the R6 interface to the base station.	Int32
r6keepalivereq-totsendfail	The total number of Keep-alive Request message failures received from the base station and relayed on the R6 interface. This counter is used to count the error while sending the R6 packets.	Int32
r6keepalivereq-totrec	The total number of R6 Keep-alive Request messages received by the base station.	Int32
r6keepalivereq-totacc	The total number of R6 Keep-alive Request messages accepted by base station.	Int32
r6keepalivereq-totrelay	The total number of R6 Keep-alive Request messages sent to the base station and relayed on the R6 interface. Triggers: Changes every time an R6 Keep-alive Request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6keepalivereq-totdenied	The total number of Keep-alive Request messages denied on the R6 interface.	Int32
r6keepalivereq-totdiscard	The total number of discarded Keep-alive Request messages relayed on the R6 interface.	Int32
r6keepalivereq-badform	The total number of badly formed R6 Keep-alive Request messages sent to the base station.	Int32
r6keepalivereq-decodeerr	The total number of R6 Keep-alive Request messages sent to the base station with decode errors.	Int32
r6keepalivereq-unspecerr	The total number of R6 Keep-alive Request messages sent to the base station with unspecified errors.	Int32
r6keepalivereq-missmandtlv	The total number of R6 Keep-alive Request messages sent to the base station with missing mandatory TLVs.	Int32
r6keepalivereq-tlvvalinval	The total number of R6 Keep-alive Request messages sent to the base station with an invalid TLV.	Int32
r6keepalivereq-unknowntrlv	The total number of R6 Keep-alive Request messages sent to the base station with an unknown TLV.	Int32
r6keepalivereq-duptlvfound	The total number of R6 Keep-alive Request messages sent to the base station with duplicate TLVs.	Int32
r6keepalivereq-nosessfound	The total number of R6 Keep-alive Request messages sent to the base station without any session information.	Int32

Variables	Description	Data Type
r6keepalivereq-admprohibit	The total number of R6 Keep-alive Request messages sent to the base station that were discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Keep-alive Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6keepalivereq-noresourcedrop	The total number of R6 Keep-alive Request messages sent to the base station that were discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Keep-alive Request message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r6keepalivereq-transiderr	The total number of R6 Keep-alive Request messages sent to the base station with a transaction ID error.	Int32
r6keepaliversp-totsent	The total number of R6 Keep-alive Response messages sent to the base station.	Int32
r6keepaliversp-retranssent	The total number of Keep-alive Response messages retransmitted on the R6 interface to the base station.	Int 32
r6keepaliversp-totsendfail	The total number of Keep-alive Response message failures received by the base station and relayed on the R6 interface. This counter is used to count the error while sending the R6 packets.	Int32
r6keepaliversp-totrec	The total number of R6 Keep-alive Response messages received by the base station.	Int32
r6keepaliversp-totacc	The total number of R6 Keep-alive Response messages accepted by base station.	Int32
r6keepaliversp-totrelay	The total number of R6 Keep-alive Response messages relayed to the base station on the R6 interface. Triggers: Changes every time an R6 Keep-alive Response message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6keepaliversp-totdenied	The total number of Keep-alive Response messages denied on the R6 interface.	Int32
r6keepaliversp-totdiscard	The total number of Keep-alive Response messages discarded on the R6 interface.	Int32
r6keepaliversp-badform	The total number of badly formed R6 Keep-alive Response messages sent to the base station.	Int32
r6keepaliversp-decodeerr	The total number of R6 Keep-alive Response messages sent to the base station with decode errors.	Int32
r6keepaliversp-unspecerr	The total number of R6 Keep-alive Response messages sent to the base station with unspecified errors.	Int32
r6keepaliversp-missmandtlv	The total number of R6 Keep-alive Response messages sent to the base station with missing mandatory TLVs.	Int32
r6keepaliversp-tlvvalinval	The total number of R6 Keep-alive Response messages sent to the base station with an invalid TLV.	Int32
r6keepaliversp-unknowntrlv	The total number of R6 Keep-alive Response messages sent to the base station with an unknown TLV.	Int32
r6keepaliversp-duptrlvfound	The total number of R6 Keep-alive Response messages sent to the base station with duplicate TLVs.	Int32

Variables	Description	Data Type
r6keepaliversp-nosessfound	The total number of R6 Keep-alive Response messages sent to the base station without any session information.	Int32
r6keepaliversp-admprohibit	The total number of R6 Keep-alive Response messages sent to the base station that were discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Keep-alive Response message is discarded or denied due to admin prohibit. Availability: across all ASN GW services.	Int32
r6keepaliversp-noresourcedrop	The total number of R6 Keep-alive Response messages sent to the base station that were discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Keep-alive Response message is discarded or denied due to resource unavailability. Availability: across all ASN GW services.	Int32
r6keepaliversp-transiderr	The total number of R6 Keep-alive Response messages sent to the base station with a transaction ID error.	Int32
r6capabilityreq-totsent	The total number of capability negotiation request messages sent to the base station on the R6 interface.	Int32
r6capabilityreq-retranssent	The total number of retransmitted capability request negotiation messages retransmitted on the R6 interface to the base station.	Int32
r6capabilityreq-totsendfail	The total number of capability negotiation request message failures received by the base station relayed on the R6 interface.	Int32
r6capabilityreq-totrec	The total number of capability negotiation request messages received by the base station on the R6 interface.	Int32
r6capabilityreq-totacc	The total number of capability negotiation request messages relayed on the R6 interface that were accepted by base station.	Int32
r6capabilityreq-totrelay	The total number of capability negotiation request messages relayed to the base station on the R6 interface.	Int32
r6capabilityreq-totdenied	The total number of denied capability negotiation request messages relayed on the R6 interface.	Int32
r6capabilityreq-totdiscard	The total number of discarded capability negotiation request messages relayed on the R6 interface.	Int32
r6capabilityreq-badform	The total number of badly formed capability negotiation request messages sent to the base station on the R6 interface.	Int32
r6capabilityreq-decodeerr	The total number of R6 capability negotiation request messages sent to the base station with decode errors.	Int32
r6capabilityreq-unspecerr	The total number of R6 capability negotiation request messages sent to the base station with unspecified errors.	Int32
r6capabilityreq-missmandtlv	The total number of R6 capability negotiation request messages sent to the base station with missing mandatory TLVs.	Int32
r6capabilityreq-tlvvalinval	The total number of R6 capability negotiation request messages sent to the base station with an invalid TLV.	Int32

Variables	Description	Data Type
r6capabilityreq-unknowntlv	The total number of R6 capability negotiation request messages sent to the base station with an unknown TLV.	Int32
r6capabilityreq-duptlvfound	The total number of R6 capability negotiation request messages sent to the base station with duplicate TLVs.	Int32
r6capabilityreq-nosessfound	The total number of R6 capability negotiation request messages sent to the base station without any session information.	Int32
r6capabilityreq-admprohibit	The total number of R6 capability negotiation request messages sent to the base station that were discarded or denied due to admin prohibit.	Int32
r6capabilityreq-noresourcedrop	The total number of R6 capability negotiation request messages sent to the base station that were discarded or denied due to resource unavailability.	Int32
r6capabilityreq-transiderr	The total number of R6 capability negotiation request messages sent to the base station with a transaction ID error.	Int32
r6capabilityrsp-totsent	The total number of R6 capability negotiation response messages sent to the base station.	Int32
r6capabilityrsp-retranssent	The total number of retransmitted capability negotiation response messages retransmitted on the R6 interface to the base station.	Int32
r6capabilityrsp-totsefail	The total number of capability negotiation response message failures received by the base station relayed on the R6 interface.	Int32
r6capabilityrsp-totrec	The total number of capability negotiation response messages received by the base station on the R6 interface.	Int32
r6capabilityrsp-totacc	The total number of capability negotiation response messages relayed on the R6 interface that were accepted by base station.	Int32
r6capabilityrsp-totrelay	The total number of capability negotiation response messages relayed to the base station on the R6 interface.	Int32
r6capabilityrsp-totdenied	The total number of denied capability negotiation response messages relayed on the R6 interface.	Int32
r6capabilityrsp-totdiscard	The total number of discarded capability negotiation response messages relayed on the R6 interface.	Int32
r6capabilityrsp-badform	The total number of badly formed capability negotiation response messages sent to the base station on the R6 interface.	Int32
r6capabilityrsp-decodeerr	The total number of R6 capability negotiation response messages sent to the base station with decode errors.	Int32
r6capabilityrsp-unspecerr	The total number of R6 capability negotiation response messages sent to the base station with unspecified errors.	Int32
r6capabilityrsp-missmandtlv	The total number of R6 capability negotiation response messages sent to the base station with missing mandatory TLVs.	Int32
r6capabilityrsp-tlvvalinval	The total number of R6 capability negotiation response messages sent to the base station with an invalid TLV.	Int32
r6capabilityrsp-unknowntlv	The total number of R6 capability negotiation response messages sent to the base station with an unknown TLV.	Int32

Variables	Description	Data Type
r6capabilityrsp-dupltlvfound	The total number of R6 capability negotiation response messages sent to the base station with duplicate TLVs.	Int32
r6capabilityrsp-nosessfound	The total number of R6 capability negotiation response messages sent to the base station without any session information.	Int32
r6capabilityrsp-admprohibit	The total number of R6 capability negotiation response messages sent to the base station that were discarded or denied due to admin prohibit.	Int32
r6capabilityrsp-noresourcedrop	The total number of R6 capability negotiation response messages sent to the base station that were discarded or denied due to resource unavailability.	Int32
r6capabilityrsp-transiderr	The total number of R6 capability negotiation response messages sent to the base station with a transaction ID error.	Int32
r6capabilityack-totsent	The total number of capability negotiation acknowledgement messages sent to the base station on the R6 interface.	Int32
r6capabilityack-retranssent	The total number of R6 capability negotiation acknowledgement messages retransmitted to the base station.	Int32
r6capabilityack-totendfail	The total number of capability negotiation acknowledgment message failures received by the base station relayed on the R6 interface.	Int32
r6capabilityack-totrec	The total number of capability negotiation acknowledgment messages received by the base station on the R6 interface.	Int32
r6capabilityack-totacc	The total number of capability negotiation acknowledgment messages relayed on the R6 interface that were accepted by base station.	Int32
r6capabilityack-totrelay	The total number of capability negotiation acknowledgment messages relayed to the base station on the R6 interface.	Int32
r6capabilityack-totdenied	The total number of denied capability negotiation acknowledgment messages relayed on the R6 interface.	Int32
r6capabilityack-totdiscard	The total number of discarded capability negotiation acknowledgment messages relayed on the R6 interface.	Int32
r6capabilityack-badform	The total number of badly formed capability negotiation acknowledgment messages sent to the base station on the R6 interface.	Int32
r6capabilityack-decodeerr	The total number of R6 capability negotiation acknowledgment messages sent to the base station with decode errors.	Int32
r6capabilityack-unspecerr	The total number of R6 capability negotiation acknowledgment messages sent to the base station with unspecified errors.	Int32
r6capabilityack-missmandtlv	The total number of R6 capability negotiation acknowledgment messages sent to the base station with missing mandatory TLVs.	Int32
r6capabilityack-tlvvalinval	The total number of R6 capability negotiation acknowledgment messages sent to the base station with an invalid TLV.	Int32
r6capabilityack-unknowntrlv	The total number of R6 capability negotiation acknowledgment messages sent to the base station with an unknown TLV.	Int32

Variables	Description	Data Type
r6capabilityack-dupltlvfound	The total number of R6 capability negotiation acknowledgment messages sent to the base station with duplicate TLVs.	Int32
r6capabilityack-nosessfound	The total number of R6 capability negotiation acknowledgment messages sent to the base station without any session information.	Int32
r6capabilityack-admprohibit	The total number of R6 capability negotiation acknowledgment messages sent to the base station that were discarded or denied due to admin prohibit.	Int32
r6capabilityack-noresourcedrop	The total number of R6 capability negotiation acknowledgment messages sent to the base station that were discarded or denied due to resource unavailability.	Int32
r6capabilityack-transiderr	The total number of R6 capability negotiation acknowledgment messages sent to the base station with a transaction ID error.	Int32
r4capabilityreq-totsent	The total number of capability negotiation request messages sent to the base station on the R4 interface.	Int32
r4capabilityreq-retranssent	The total number of retransmitted capability request negotiation messages retransmitted on the R4 interface to the base station.	Int32
r4capabilityreq-totendfail	The total number of capability negotiation request message failures received by the base station relayed on the R4 interface.	Int32
r4capabilityreq-totrec	The total number of capability negotiation request messages received by the base station on the R4 interface.	Int32
r4capabilityreq-totacc	The total number of capability negotiation request messages relayed on the R4 interface that were accepted by base station.	Int32
r4capabilityreq-totrelay	The total number of capability negotiation request messages relayed to the base station on the R4 interface.	Int32
r4capabilityreq-totdenied	The total number of denied capability negotiation request messages relayed on the R4 interface.	Int32
r4capabilityreq-totdiscard	The total number of discarded capability negotiation request messages relayed on the R4 interface.	Int32
r4capabilityreq-badform	The total number of badly formed capability negotiation request messages sent to the base station on the R4 interface.	Int32
r4capabilityreq-decodeerr	The total number of R4 capability negotiation request messages sent to the base station with decode errors.	Int32
r4capabilityreq-unspecerr	The total number of R4 capability negotiation request messages sent to the base station with unspecified errors.	Int32
r4capabilityreq-missmandtlv	The total number of R4 capability negotiation request messages sent to the base station with missing mandatory TLVs.	Int32
r4capabilityreq-tlvvalinval	The total number of R4 capability negotiation request messages sent to the base station with an invalid TLV.	Int32
r4capabilityreq-unknowntrlv	The total number of R4 capability negotiation request messages sent to the base station with an unknown TLV.	Int32

■ Common Syntax Options

Variables	Description	Data Type
r4capabilityreq-duptlvfound	The total number of R4 capability negotiation request messages sent to the base station with duplicate TLVs.	Int32
r4capabilityreq-nosessfound	The total number of R4 capability negotiation request messages sent to the base station without any session information.	Int32
r4capabilityreq-admprohibit	The total number of R4 capability negotiation request messages sent to the base station that were discarded or denied due to admin prohibit.	Int32
r4capabilityreq-noresourcedrop	The total number of R4 capability negotiation request messages sent to the base station that were discarded or denied due to resource unavailability.	Int32
r4capabilityreq-transiderr	The total number of R4 capability negotiation request messages sent to the base station with a transaction ID error.	Int32
r4capabilityrsp-totsent	The total number of R4 capability negotiation response messages sent to the base station.	Int32
r4capabilityrsp-retranssent	The total number of retransmitted capability negotiation response messages retransmitted on the R4 interface to the base station.	Int32
r4capabilityrsp-totsefail	The total number of capability negotiation response message failures received by the base station relayed on the R4 interface.	Int32
r4capabilityrsp-totrec	The total number of capability negotiation response messages received by the base station on the R4 interface.	Int32
r4capabilityrsp-totacc	The total number of capability negotiation response messages relayed on the R4 interface that were accepted by base station.	Int32
r4capabilityrsp-totrelay	The total number of capability negotiation response messages relayed to the base station on the R4 interface.	Int32
r4capabilityrsp-totdenied	The total number of denied capability negotiation response messages relayed on the R4 interface.	Int32
r4capabilityrsp-totdiscard	The total number of discarded capability negotiation response messages relayed on the R4 interface.	Int32
r4capabilityrsp-badform	The total number of badly formed capability negotiation response messages sent to the base station on the R4 interface.	Int32
r4capabilityrsp-decodeerr	The total number of R4 capability negotiation response messages sent to the base station with decode errors.	Int32
r4capabilityrsp-unspecerr	The total number of R4 capability negotiation response messages sent to the base station with unspecified errors.	Int32
r4capabilityrsp-missmandtlv	The total number of R4 capability negotiation response messages sent to the base station with missing mandatory TLVs.	Int32
r4capabilityrsp-tlvvalinval	The total number of R4 capability negotiation response messages sent to the base station with an invalid TLV.	Int32
r4capabilityrsp-unknowntrlv	The total number of R4 capability negotiation response messages sent to the base station with an unknown TLV.	Int32
r4capabilityrsp-duptlvfound	The total number of R4 capability negotiation response messages sent to the base station with duplicate TLVs.	Int32

Variables	Description	Data Type
r4capabilityrsp-nosessfound	The total number of R4 capability negotiation response messages sent to the base station without any session information.	Int32
r4capabilityrsp-admprohibit	The total number of R4 capability negotiation response messages sent to the base station that were discarded or denied due to admin prohibit.	Int32
r4capabilityrsp-noresourcedrop	The total number of R4 capability negotiation response messages sent to the base station that were discarded or denied due to resource unavailability.	Int32
r4capabilityrsp-transiderr	The total number of R4 capability negotiation response messages sent to the base station with a transaction ID error.	Int32
r4capabilityack-totsent	The total number of capability negotiation acknowledgement messages sent to the base station on the R4 interface.	Int32
r4capabilityack-retranssent	The total number of R4 capability negotiation acknowledgement messages retransmitted to the base station.	Int32
r4capabilityack-totsendfail	The total number of capability negotiation acknowledgment message failures received by the base station relayed on the R4 interface.	Int32
r4capabilityack-totrec	The total number of capability negotiation acknowledgment messages received by the base station on the R4 interface.	Int32
r4capabilityack-totacc	The total number of capability negotiation acknowledgment messages relayed on the R4 interface that were accepted by base station.	Int32
r4capabilityack-totrelay	The total number of capability negotiation acknowledgment messages relayed to the base station on the R4 interface.	Int32
r4capabilityack-totdenied	The total number of denied capability negotiation acknowledgment messages relayed on the R4 interface.	Int32
r4capabilityack-totdiscard	The total number of discarded capability negotiation acknowledgment messages relayed on the R4 interface.	Int32
r4capabilityack-badform	The total number of badly formed capability negotiation acknowledgment messages sent to the base station on the R4 interface.	Int32
r4capabilityack-decodeerr	The total number of R4 capability negotiation acknowledgment messages sent to the base station with decode errors.	Int32
r4capabilityack-unspecerr	The total number of R4 capability negotiation acknowledgment messages sent to the base station with unspecified errors.	Int32
r4capabilityack-missmandtlv	The total number of R4 capability negotiation acknowledgment messages sent to the base station with missing mandatory TLVs.	Int32
r4capabilityack-tlvvalinval	The total number of R4 capability negotiation acknowledgment messages sent to the base station with an invalid TLV.	Int32
r4capabilityack-unknowntrlv	The total number of R4 capability negotiation acknowledgment messages sent to the base station with an unknown TLV.	Int32
r4capabilityack-duptlvfound	The total number of R4 capability negotiation acknowledgment messages sent to the base station with duplicate TLVs.	Int32

Variables	Description	Data Type
r4capabilityack-nosessfound	The total number of R4 capability negotiation acknowledgment messages sent to the base station without any session information.	Int32
r4capabilityack-admprohibit	The total number of R4 capability negotiation acknowledgment messages sent to the base station that were discarded or denied due to admin prohibit.	Int32
r4capabilityack-noresourcedrop	The total number of R4 capability negotiation acknowledgment messages sent to the base station that were discarded or denied due to resource unavailability.	Int32
r4capabilityack-transiderr	The total number of R4 capability negotiation acknowledgment messages sent to the base station with a transaction ID error.	Int32
r4datagresend-totpacksent	The total number of data message received with checksum error through GRE tunnel the R4 interface.	Int32
r4datagresend-senderr	The total number of data message received with invalid packet length error through GRE tunnel the R4 interface.	Int32
r4datagresend-totbytsent	The total number of data message received through GRE tunnel without session information the the R4 interface.	Int32
r4datagresend-unspeerr	The total number of data message received through GRE tunnel with unspecified error the the R4 interface.	Int32
r6mspreattreq-congestion	The total number of R6 MS pre-attachment request messages discarded or denied due to congestion or overload. Triggers: Changes every time an R6 MS pre-attachment request message is discarded or denied due to congestion or overload. Availability: across all the ASNGW service	Int32
total-sessions-connected	The total number of active sessions currently connected through the ASNGW.	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 6

ASNPC Schema Statistics

The ASNPC schema provides operational statistics that can be used for monitoring and troubleshooting the following products: ASNPC

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 6. Bulk Statistic Variables in the ASN-PC Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the ASN PC service. This is a key variable.	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the ASN PC service. This is an internal reference number. This is a key variable.	Int32
servname	The name of the ASN PC service for which the statistics are displayed. This is a key variable.	String
servid	The identification number of the ASN PC service for which the statistics are displayed. This is a key variable.	Int32
r6imentstachareq-totsent	The number of Idle Mode Entry State Change Requests sent to the base station on the R6 interface.	Int32
r6imentstachareq-retranssent	The total number of Idle Mode Entry State Change Requests re-transmitted on R6 the interface to the base station.	Int32
r6imentstachareq-totsendfail	The total number of failures that occurred during transaction ID generation of R6 Idle Mode Entry State Change Request messages. This counter is used to count the error while sending the R6 packets.	Int32
r6imentstachareq-totrec	The total number of Idle Mode Entry State Change Request messages received on R6 interface.	Int32
r6imentstachareq-totacc	The total number of Idle Mode Entry State Change Request messages accepted on R6 interface.	Int32
r6imentstachareq-totrelay	The total number of Idle Mode Entry State Change Requests messages relayed to the base station on the R6 interface. Triggers: Changes every time an Idle Mode Entry State Change Request message is relayed over the R6 interface. Availability: across all ASNGW services.	Int32
r6imentstachareq-totdenied	The total number of Idle Mode Entry State Change Request messages denied on R6 interface.	Int32
r6imentstachareq-totdiscard	The total number of Idle Mode Entry State Change Request messages discarded on R6 interface.	Int32
r6imentstachareq-badform	The total number of Idle Mode Entry State Change Request messages sent on the R6 interface.	Int32
r6imentstachareq-decodeerr	The total number of Idle Mode Entry State Change Request messages on R6 interface with decode error.	Int32
r6imentstachareq-unspecerr	The total number of Idle Mode Entry State Change Request messages on R6 interface with unspecified error.	Int32
r6imentstachareq-mismandtlv	The total number of Idle Mode Entry State Change Request messages on R6 interface with missing mandatory TLVs.	Int32
r6imentstachareq-tlvvalinval	The total number of Idle Mode Entry State Change Request messages on R6 interface with invalid TLV value.	Int32
r6imentstachareq-unknowntrlv	The total number of Idle Mode Entry State Change Request messages on R6 interface with unknown TLVs.	Int32
r6imentstachareq-duptrlvfound	The total number of Idle Mode Entry State Change Request messages on R6 interface with duplicate TLVs.	Int32

Variables	Description	Data Type
r6imentstachareq-nosessfound	The total number of Idle Mode Entry State Change Request messages on R6 interface without any session information.	Int32
r6imentstachareq-admprohibit	The total number of Idle Mode Entry State Change Request messages on R6 interface with transaction ID errors.	Int32
r6imentstachareq-noresourcedrop	The total number of Idle Mode Entry State Change Request messages discarded or denied due to admin prohibit. Triggers: Changes every time an Idle Mode Entry State Change Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6imentstachareq-transiderr	The total number of Idle Mode Entry State Change Request messages discarded or denied due to transaction ID errors	Int32
r6imentstacharsp-totsent	The total number of Idle Mode Entry State Change Responses sent to the Base Station.	Int32
r6imentstacharsp-retranssent	The total number of Idle Mode Entry State Change Responses re-transmitted on R6 the interface.	Int32
r6imentstacharsp-totsendfail	The total number of failures that occurred during transaction ID generation of R6 Idle Mode Entry State Change Response messages. This counter is used to count the error while sending the R6 packets.	Int32
r6imentstacharsp-totrec	The total number of Idle Mode Entry State Change Response messages received on R6 interface.	Int32
r6imentstacharsp-totacc	The total number of Idle Mode Entry State Change Response messages accepted on R6 interface.	Int32
r6imentstacharsp-totrelay	The total number of Idle Mode Entry State Change Response messages relayed to the base station on the R6 interface. Triggers: Changes every time an Idle Mode Entry State Change Response message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6imentstacharsp-totdenied	The total number of Idle Mode Entry State Change Response messages denied on R6 interface.	Int32
r6imentstacharsp-totdiscard	The total number of Idle Mode Entry State Change Response messages discarded on R6 interface.	Int32
r6imentstacharsp-badform	The total number of Idle Mode Entry State Change Response messages sent on the R6 interface.	Int32
r6imentstacharsp-decodeerr	The total number of Idle Mode Entry State Change Response messages on R6 interface with decode error.	Int32
r6imentstacharsp-unspecerr	The total number of Idle Mode Entry State Change Response messages on R6 interface with unspecified error.	Int32
r6imentstacharsp-misssmandtlv	The total number of Idle Mode Entry State Change Response messages on R6 interface with missing mandatory TLVs.	Int32
r6imentstacharsp-tlvvalinval	The total number of Idle Mode Entry State Change Response messages on R6 interface with invalid TLV value.	Int32

Variables	Description	Data Type
r6imentstacharsp-unknowntrlv	The total number of Idle Mode Entry State Change Response messages on R6 interface with unknown TLVs.	Int32
r6imentstacharsp-duptrlvfound	The total number of Idle Mode Entry State Change Response messages on R6 interface with duplicate TLVs	Int32
r6imentstacharsp-nosessfound	The total number of Idle Mode Entry State Change Response messages on R6 interface without any session information.	Int32
r6imentstacharsp-admprohibit	The total number of Idle Mode Entry State Change Response messages on R6 interface with transaction ID errors.	Int32
r6imentstacharsp-noresourcedrop	The total number of Idle Mode Entry State Change Response messages discarded or denied due to admin prohibit. Triggers: Changes every time an Idle Mode Entry State Change Response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6imentstacharsp-transiderr	The total number of Idle Mode Entry State Change Response messages discarded or denied due to transaction ID errors	Int32
r6imentstachaack-totsent	The total number of Idle Mode Entry State Change Acknowledgements sent to the Base Station.	Int32
r6imentstachaack-retranssent	The total number of Idle Mode Entry State Change Acknowledgement messages re-transmitted on R6 interface.	Int32
r6imentstachaack-totsendfai	The total number of R6 idle Mode Entry State Change Acknowledgement messages sent to the base station. This counter is used to count the error while sending the R6 packets.	Int32
r6imentstachaack-totrec	The total number of R6 Idle Mode Entry State Change Acknowledgement messages received on R6 interface.	Int32
r6imentstachaack-totacc	The total number of R6 Idle Mode Entry State Change Acknowledgement messages accepted on R6 interface.	Int32
r6imentstachaack-totrelay	The total number of R6 Idle Mode Entry State Change Acknowledgement messages relayed to the base station on the R6 interface. Triggers: Changes every time an R6 Idle Mode Entry State Change Acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6imentstachaack-totdenied	The total number of R6 Idle Mode Entry State Change Acknowledgement messages denied on R6 interface.	Int32
r6imentstachaack-totdiscard	The total number of R6 Idle Mode Entry State Change Acknowledgement messages discarded on R6 interface.	Int32
r6imentstachaack-badform	The total number of badly formed R6 Idle Mode Entry State Change Acknowledgement messages on R6 interface.	Int32
r6imentstachaack-decodeerr	The total number of R6 Idle Mode Entry State Change Acknowledgement messages on R6 interface with decode error.	Int32
r6imentstachaack-unspecerr	The total number of R6 Idle Mode Entry State Change Acknowledgement messages on R6 interface with unspecified error.	Int32

Variables	Description	Data Type
r6imentstachaack-missmandtlv	The total number of R6 Idle Mode Entry State Change Acknowledgement messages on R6 interface with missing mandatory TLVs.	Int32
r6imentstachaack-tlvvalinval	The total number of R6 Idle Mode Entry State Change Acknowledgement messages on R6 interface with invalid TLV value	Int32
r6imentstachaack-unknowntlv	The total number of R6 Idle Mode Entry State Change Acknowledgement messages on R6 interface with unknown TLVs	Int32
r6imentstachaack-duptlvfound	The total number of R6 Idle Mode Entry State Change Acknowledgement messages on R6 interface with duplicate TLVs.	Int32
r6imentstachaack-nosessfound	The total number of R6 Idle Mode Entry State Change Acknowledgement messages on R6 interface without any session information.	Int32
r6imentstachaack-adminprohib	The total number of R6 Idle Mode Entry State Change Acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Idle Mode Entry State Change Acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6imentstachaack-noresourcedrop	The total number of R6 Idle Mode Entry State Change Acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Idle Mode Entry State Change Acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6imentstachaack-transiderr	The total number of R6 Idle Mode Entry State Change Acknowledgement messages on R6 interface with transaction ID errors.	Int32
r6imexitstachareq-totsent	The total number of Idle Mode Exit State Change Requests sent to the Base Station.	Int32
r6imexitstachareq-retranssent	The total number of R6 Idle Mode Exit State Change Request messages sent to the base station.	Int32
r6imexitstachareq-totsendfail	The total number of R6 Idle Mode Exit State Change Request messages sent to the base station. This counter is used to count the error while sending the R6 packets.	Int32
r6imexitstachareq-totrec	The total number of R6 Idle Mode Exit State Change Request messages received on R6 interface.	Int32
r6imexitstachareq-totacc	The total number of R6 Idle Mode Exit State Change Request messages accepted on R6 interface.	Int32
r6imexitstachareq-totrelay	The total number of R6 Idle Mode Exit State Change Request messages relayed to the base station on the R6 interface. Triggers: Changes every time an R6 Idle Mode Exit State Change Request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6imexitstachareq-totdenied	The total number of R6 Idle Mode Exit State Change Request messages denied on R6 interface.	Int32
r6imexitstachareq-totdiscard	The total number of R6 Idle Mode Exit State Change Request messages discarded on R6 interface.	Int32

Variables	Description	Data Type
r6imexitstachareq-badform	The total number of badly formed R6 Idle Mode Exit State Change Request messages on R6 interface.	Int32
r6imexitstachareq-decodeerr	The total number of R6 Idle Mode Exit State Change Request messages on R6 interface with decode error.	Int32
r6imexitstachareq-unspecerr	The total number of R6 Idle Mode Exit State Change Request messages on R6 interface with unspecified error.	Int32
r6imexitstachareq-missmandtlv	The total number of R6 Idle Mode Exit State Change Request messages on R6 interface with missing mandatory TLVs.	Int32
r6imexitstachareq-tlvvalinval	The total number of R6 Idle Mode Exit State Change Request messages on R6 interface with invalid TLV value	Int32
r6imexitstachareq-unknownnlv	The total number of R6 Idle Mode Exit State Change Request messages on R6 interface with unknown TLVs	Int32
r6imexitstachareq-dupltlvfound	The total number of R6 Idle Mode Exit State Change Request messages on R6 interface with duplicate TLVs.	Int32
r6imexitstachareq-nosessfound	The total number of R6 Idle Mode Exit State Change Request messages on R6 interface without any session information.	Int32
r6imexitstachareq-admprohibit	The total number of R6 Idle Mode Exit State Change Request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Idle Mode Exit State Change Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6imexitstachareq-noresourcedrop	The total number of R6 Idle Mode Exit State Change Request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Idle Mode Exit State Change Request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6imexitstachareq-transiderr	The total number of R6 Idle Mode Exit State Change Request messages on R6 interface with transaction ID errors.	Int32
r6imexitstacharsp-totsent	The total number of Idle Mode Exit State Change Responses sent to the Base Station.	Int32
r6imexitstacharsp-retranssent	The total number of R6 Idle Mode Exit State Change Response messages re-transmitted on R6 interface.	Int32
r6imexitstacharsp-totsendfail	The total number of failed R6 idle Mode Exit State Change Response messages sent to the base station. This counter is used to count the error while sending the R6 packets.	Int32
r6imexitstacharsp-totrec	The total number of R6 Idle Mode Exit State Change Response messages received on R6 interface.	Int32
r6imexitstacharsp-totacc	The total number of R6 Idle Mode Exit State Change Response messages accepted on R6 interface.	Int32

Variables	Description	Data Type
r6imexitstacharsp-totrelay	The total number of R6 Idle Mode Exit State Change Response messages relayed to the base station on the R6 interface. Triggers: Changes every time an R6 Idle Mode Exit State Change Response message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6imexitstacharsp-totdenied	The total number of R6 Idle Mode Exit State Change Response messages denied on R6 interface.	Int32
r6imexitstacharsp-totdiscard	The total number of R6 Idle Mode Exit State Change Response messages discarded on R6 interface.	Int32
r6imexitstacharsp-badform	The total number of badly formed R6 Idle Mode Exit State Change Response messages on R6 interface.	Int32
r6imexitstacharsp-decodeerr	The total number of R6 Idle Mode Exit State Change Response messages on R6 interface with decode error.	Int32
r6imexitstacharsp-unspecerr	The total number of R6 Idle Mode Exit State Change Response messages on R6 interface with unspecified error.	Int32
r6imexitstacharsp-missmandtlv	The total number of R6 Idle Mode Exit State Change Response messages on R6 interface with missing mandatory TLVs.	Int32
r6imexitstacharsp-unknowntrlv	The total number of R6 Idle Mode Exit State Change Response messages on R6 interface with an unknown TLV value.	Int32
r6imexitstacharsp-duptrlvfound	The total number of R6 Idle Mode Exit State Change Response messages on R6 interface with duplicate TLVs.	Int32
r6imexitstacharsp-nosessfound	The total number of R6 Idle Mode Exit State Change Response messages on R6 interface without any session information.	Int32
r6imexitstacharsp-admprohibit	The total number of R6 Idle Mode Exit State Change Response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Idle Mode Exit State Change Response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6imexitstacharsp-noresourcedrop	The total number of R6 Idle Mode Exit State Change Response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Idle Mode Exit State Change Response message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r6imexitstacharsp-transiderr	The total number of R6 Idle Mode Exit State Change Response messages with translation ID errors.	Int32
r6locupdre req-totsent	The total number of R6 Location Update Request messages sent to the base station.	Int32
r6locupdre req-retranssent	The total number of R6 Location Update Request messages re-transmitted on R6 interface.	Int32
r6locupdre req-totse n d fail	The total number of failed R6 Location Update Request messages sent to the base station. This counter is used to count the error while sending the R6 packets.	Int32
r6locupdre req-totrec	The total number of R6 Location Update Request Location Update Request messages received on R6 interface.	Int32

Variables	Description	Data Type
r6locupdreq-totacc	The total number of R6 Location Update Request messages accepted on R6 interface.	Int32
r6locupdreq-totrelay	The total number of R6 Location Update Request messages relayed to the base station on the R6 interface. Triggers: Changes every time an R6 Location Update Request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6locupdreq-totdenied	The total number of R6 Location Update Request messages denied on R6 interface.	Int32
r6locupdreq-totdiscard	The total number of R6 Location Update Request messages discarded on R6 interface.	Int32
r6locupdreq-badform	The total number of badly formed R6 Location Update Request messages on R6 interface.	Int32
r6locupdreq-decodeerr	The total number of R6 Location Update Request messages on R6 interface with decode errors.	Int32
r6locupdreq-unspecerr	The total number of R6 Location Update Request messages on R6 interface with unspecified error.	Int32
r6locupdreq-missmandtlv	The total number of R6 Location Update Request messages on R6 interface with missing mandatory TLVs.	Int32
r6locupdreq-tlvvalinval	The total number of R6 Location Update Request messages on R6 interface with an unknown TLV value.	Int32
r6locupdreq-unknownntlv	The total number of R6 Location Update Request messages on R6 interface with unknown TLVs.	Int32
r6locupdreq-duptlvfound	The total number of R6 Location Update Request messages on R6 interface with duplicate TLVs.	Int32
r6locupdreq-nosessfound	The total number of R6 Location Update Request messages without any session information.	Int32
r6locupdreq-admprohibit	The total number of R6 Location Update Request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Location Update Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6locupdreq-noresourcedrop	The total number of R6 Location Update Request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Location Update Request message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r6locupdreq-transiderr	The total number of R6 Location Update Request messages with translation ID errors.	Int32
r6locupdrsp-totsent	The total number of Location Update Responses sent to the Base Station.	Int32
r6locupdrsp-totsendfail	The total number of failed R6 Location Update Response messages sent on the R6 interface. This counter is used to count the error while sending the R6 packets.	Int32
r6locupdrsp-totrec	The total number of R6 Location Update Response messages received on R6 interface.	Int32
r6locupdrsp-totacc	The total number of R6 Location Update Response messages accepted on R6 interface.	Int32

Variables	Description	Data Type
r6locupdrsp-totrelay	The total number of R6 Location Update Response messages relayed to the base station on the R6 interface. Triggers: Changes every time an R6 Location Update Response message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6locupdrsp-totdenied	The total number of R6 Location Update Response messages denied on R6 interface.	Int32
r6locupdrsp-totdiscard	The total number of R6 Location Update Response messages discarded on R6 interface.	Int32
r6locupdrsp-badform	The total number of badly formed R6 Location Update Response messages on R6 interface.	Int32
r6locupdrsp-decodeerr	The total number of R6 Location Update Response messages on R6 interface with decode errors.	Int32
r6locupdrsp-unspecerr	The total number of R6 Location Update Response messages on R6 interface with unspecified error.	Int32
r6locupdrsp-missmandtlv	The total number of R6 Location Update Response messages on R6 interface with missing mandatory TLVs.	Int32
r6locupdrsp-tlvvalinval	The total number of R6 Location Update Response messages on R6 interface with an unknown TLV value.	Int32
r6locupdrsp-unknownctlv	The total number of R6 Location Update Response messages on R6 interface with unknown TLVs.	Int32
r6locupdrsp-duptlvfound	The total number of R6 Location Update Response messages on R6 interface with duplicate TLVs.	Int32
r6locupdrsp-nosessfound	The total number of R6 Location Update Response messages without any session information.	Int32
r6locupdrsp-admprohibit	The total number of R6 Location Update Response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Location Update Response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6locupdrsp-noresourcedrop	The total number of R6 Location Update Response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Location Update Response message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r6locupdrsp-transiderr	The total number of R6 Location Update Response messages with translation ID errors	Int32
r6locupdcnf-totsent	Indicates the number of R6 Location Update Confirm messages sent to the Base Station.	Int32
r6locupdcnf-retranssent	The total number of Location Update Confirm messages retransmitted on the R6 interface to the base station.	Int32
r6locupdcnf-totsefail	The total number of Location Update Confirm message failures received from the base station and relayed on the R6 interface. This counter is used to count the error while sending the R6 packets.	Int32
r6locupdcnf-totrec	The total number of R6 Location Update Confirm messages received by the base station.	Int32

Variables	Description	Data Type
r6locupdcnf-totacc	The total number of R6 Location Update Confirm messages accepted by base station.	Int32
r6locupdcnf-totrelay	The total number of R6 Location Update Confirm messages sent to the base station and relayed on the R6 interface. Triggers: Changes every time an R6 Location Update Confirm message is relayed by the R6 interface. Availability: across all ASNGW services	Int32
r6locupdcnf-totdenied	The total number of Location Update Confirm messages denied on the R6 interface.	Int32
r6locupdcnf-totdiscard	The total number of Location Update Confirm messages discarded on the R6 interface.	Int32
r6locupdcnf-badform	The total number of badly formed R6 Location Update Confirm messages sent to the base station.	Int32
r6locupdcnf-decodeerr	The total number of R6 Location Update Confirm messages sent to the base station with decode errors.	Int32
r6locupdcnf-unspecerr	The total number of R6 Location Update Confirm messages sent to the base station with unspecified errors.	Int32
r6locupdcnf-missmandtlv	The total number of R6 Location Update Confirm messages sent to the base station with missing mandatory TLVs.	Int32
r6locupdcnf-tlvvalinval	The total number of R6 Location Update Confirm messages sent to the base station with an invalid TLV.	Int32
r6locupdcnf-unknownctlv	The total number of R6 Location Update Confirm messages sent to the base station with an unknown TLV.	Int32
r6locupdcnf-duptlvfound	The total number of R6 Location Update Confirm messages sent to the base station with duplicate TLVs.	Int32
r6locupdcnf-nosessfound	The total number of R6 Location Update Confirm messages sent to the base station without any session information.	Int32
r6locupdcnf-admprohibit	The total number of R6 Location Update Confirm messages sent to the base station that were discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Location Update Confirm message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6locupdcnf-noresourcedrop	The total number of R6 Location Update Confirm messages sent to the base station that were discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Location Update Confirm message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r6locupdcnf-transiderr	The total number of R6 Location Update Confirm messages sent to the base station with a transaction ID error.	Int32
r6pagannouce-totsent	The total number of R6 Paging Announcement messages sent to the Base Station.	Int32
r6pagannouce-retranssent	The total number of Paging Announcement messages retransmitted on the R6 interface to the base station.	Int32

Variables	Description	Data Type
r6pagannouce-totsendfail	The total number of Paging Announcement message failures received from the base station and relayed on the R6 interface. This counter is used to count the error while sending the R6 packets.	Int32
r6pagannouce-totrec	The total number of R6 Paging Announcement messages received by the base station.	Int32
r6pagannouce-totacc	The total number of R6 Paging Announcement messages accepted by base station.	Int32
r6pagannouce-totrelay	The total number of R6 Paging Announcement messages sent to the base station and relayed on the R6 interface. Triggers: Changes every time an R6 Paging Announcement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6pagannouce-totdenied	The total number of Paging Announcement messages denied on the R6 interface.	Int32
r6pagannouce-totdiscard	The total number of Paging Announcement messages discarded on the R6 interface.	Int32
r6pagannouce-badform	The total number of badly formed R6 Paging Announcement messages sent to the base station.	Int32
r6pagannouce-decodeerr	The total number of R6 Paging Announcement messages sent to the base station with decode errors.	Int32
r6pagannouce-unspecerr	The total number of R6 Paging Announcement messages sent to the base station with unspecified errors.	Int32
r6pagannouce-missmandtlv	The total number of R6 Paging Announcement messages sent to the base station with missing mandatory TLVs.	Int32
r6pagannouce-tlvvalinval	The total number of R6 Paging Announcement messages sent to the base station with an invalid TLV.	Int32
r6pagannouce-unknowntrlv	The total number of R6 Paging Announcement messages sent to the base station with an unknown TLV.	Int32
r6pagannouce-duptlvfound	The total number of R6 Paging Announcement messages sent to the base station with duplicate TLVs.	Int32
r6pagannouce-nosessfound	The total number of R6 Paging Announcement messages sent to the base station without any session information.	Int32
r6pagannouce-admprohibit	The total number of R6 Paging Announcement messages sent to the base station that were discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Paging Announcement message is discarded or denied due to admin prohibit. Availability: across all ASN GW services.	Int32
r6pagannouce-noresourcedrop	The total number of R6 Paging Announcement messages sent to the base station that were discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Paging Announcement message is discarded or denied due to resource unavailability. Availability: across all ASN GW services.	Int32
r6pagannouce-transiderr	The total number of R6 Paging Announcement messages sent to the base station with a transaction ID error.	Int32
r6keepalivereq-totrec	The total number of R6 Keep-alive Request messages received by the base station.	Int32

Variables	Description	Data Type
r6keepalivereq-totacc	The total number of R6 Keep-alive Request messages accepted by base station.	Int32
r6keepalivereq-totrelay	The total number of R6 Keep-alive Request messages sent to the base station and relayed on the R6 interface. Triggers: Changes every time an R6 Keep-alive Request message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6keepalivereq-totdenied	The total number of Keep-alive Request messages denied on the R6 interface.	Int32
r6keepalivereq-totdiscard	The total number of Keep-alive Request messages discarded on the R6 interface.	Int32
r6keepalivereq-badform	The total number of badly formed R6 Keep-alive Request messages sent to the base station.	Int32
r6keepalivereq-decodeerr	The total number of R6 Keep-alive Request messages sent to the base station with decode errors.	Int32
r6keepalivereq-unspecerr	The total number of R6 Keep-alive Request messages sent to the base station with unspecified errors.	Int32
r6keepalivereq-missmandtlv	The total number of R6 Keep-alive Request messages sent to the base station with missing mandatory TLVs.	Int32
r6keepalivereq-tlvvalinval	The total number of R6 Keep-alive Request messages sent to the base station with an invalid TLV.	Int32
r6keepalivereq-unknowntrlv	The total number of R6 Keep-alive Request messages sent to the base station with an unknown TLV.	Int32
r6keepalivereq-duptlvfound	The total number of R6 Keep-alive Request messages sent to the base station with duplicate TLVs.	Int32
r6keepalivereq-nosessfound	The total number of R6 Keep-alive Request messages sent to the base station without any session information.	Int32
r6keepalivereq-admprohibit	The total number of R6 Keep-alive Request messages sent to the base station that were discarded or denied due to admin prohibit. Triggers: Changes every time an R6 Keep-alive Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6keepalivereq-noresourcedrop	The total number of R6 Keep-alive Request messages sent to the base station that were discarded or denied due to resource unavailability. Triggers: Changes every time an R6 Keep-alive Request message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r6keepalivereq-transiderr	The total number of R6 Keep-alive Request messages sent to the base station with a transaction ID error.	Int32
r6keepaliversp-totsent	The total number of Keep-alive Response messages sent to the Base Station on the R6 interface.	Int32
r6keepaliversp-retranssent	The total number of Keep-alive Response messages retransmitted on the R6 interface.	Int32
r6keepaliversp-totsendfail	The total number of failed Keep-alive Response messages that occurred during transaction ID generation. This counter is used to count the error while sending the R6 packets.	Int32

Variables	Description	Data Type
r6unknown-totrec	The total number of Unknown messages received on R6 interface.	Int32
r6unknown-totacc	The total number of Unknown messages accepted on R6 interface.	Int32
r6unknown-totrelay	The total number of Unknown messages received from the base station and relayed on the R6 interface. Triggers: Changes every time an Unknown message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32
r6unknown-totdenied	The total number of Unknown messages denied on R6 interface.	Int32
r6unknown-totdiscard	The total number of Unknown messages discarded on R6 interface.	Int32
r6unknown-badform	The total number of badly formed Unknown messages on R6 interface	Int32
r6unknown-decodeerr	The total number of Unknown messages on R6 interface with decode error.	Int32
r6unknown-unspecerr	The total number of Unknown messages on R6 interface with unspecified error.	Int32
r6unknown-missmandtlv	The total number of Unknown messages on R6 interface with missing mandatory TLVs.	Int32
r6unknown-tlvvalinval	The total number of Unknown messages on R6 interface with invalid TLV value	Int32
r6unknown-unknowntrlv	The total number of Unknown messages on R6 interface with unknown TLV value	Int32
r6unknown-duptlvfound	The total number of Unknown messages on R6 interface with duplicate TLVs.	Int32
r6unknown-nosessfound	The total number of Unknown messages on R6 interface without any session information.	Int32
r6unknown-admprohibit	The total number of Unknown messages discarded or denied due to admin prohibit. Triggers: Changes every time an Unknown message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r6unknown-noresourcedrop	The total number of Unknown messages discarded or denied due to resource unavailability. Triggers: Changes every time an Unknown message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r6unknown-transiderr	The total number of Unknown messages on R6 interface with transaction ID errors.	Int32
r4imentstachareq-totsent	The total number of R4 Idle Mode Entry State Change Request messages sent to the ASNGW.	Int32
r4imentstachareq-retranssent	The total number of R4 Idle Mode Entry State Change Request messages re-transmitted on R4 interface.	Int32
r4imentstachareq-totsendfail	The total number of failures occurred during transaction id generation and R4 Idle Mode Entry State Change Request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4imentstachareq-totrec	The total number of R4 Idle Mode Entry State Change Request messages received on R4 interface.	Int32
r4imentstachareq-totacc	The total number of R4 Idle Mode Entry State Change Request messages accepted on R4 interface.	Int32

Variables	Description	Data Type
r4imentstachareq-totrelay	The total number of R4 Idle Mode Entry State Change Request messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Idle Mode Entry State Change Request message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4imentstachareq-totdenied	The total number of R4 Idle Mode Entry State Change Request messages denied on R4 interface.	Int32
r4imentstachareq-totdiscard	The total number of R4 Idle Mode Entry State Change Request messages discarded on R4 interface.	Int32
r4imentstachareq-badform	The total number of badly formed R4 Idle Mode Entry State Change Request messages on R4 interface.	Int32
r4imentstachareq-decodeerr	The total number of R4 Idle Mode Entry State Change Request messages on R4 interface with decode error.	Int32
r4imentstachareq-unspecerr	The total number of R4 Idle Mode Entry State Change Request messages on R4 interface with unspecified error.	Int32
r4imentstachareq-misssmandtlv	The total number of R4 Idle Mode Entry State Change Request messages on R4 interface with missing mandatory TLVs.	Int32
r4imentstachareq-tlvvalinval	The total number of R4 Idle Mode Entry State Change Request messages on R4 interface with invalid TLV value	Int32
r4imentstachareq-unknowntrlv	The total number of R4 Idle Mode Entry State Change Request messages on R4 interface with unknown TLVs.	Int32
r4imentstachareq-duptlvfound	The total number of R4 Idle Mode Entry State Change Request messages on R4 interface with duplicate TLVs.	Int32
r4imentstachareq-nosessfound	The total number of R4 Idle Mode Entry State Change Request messages on R4 interface without any session information	Int32
r4imentstachareq-admprohibit	The total number of R4 Idle Mode Entry State Change Request messages discarded or denied due to admin prohibit. Triggers: Changes every time a R4 Idle Mode Entry State Change Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imentstachareq-noresourcedrop	The total number of R4 Idle Mode Entry State Change Request messages discarded or denied due to resource unavailability. Triggers: Changes every time a R4 idle mode entry MS state change request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4imentstachareq-transiderr	The total number of R4 Idle Mode Entry State Change Request messages on R4 interface with transaction ID errors.	Int32
r4imentstacharsp-totsent	The number of Idle Mode Entry State Change Responses sent to the ASNGW.	Int32
r4imentstacharsp-retranssent	The total number of R4 Idle Mode Entry State Change Response messages re-transmitted on R4 interface.	Int32

Variables	Description	Data Type
r4imentstacharsp-totseendfail	The total number of failures occurred during transaction id generation and R4 Idle Mode Entry State Change Response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4imentstacharsp-totrec	The total number of R4 Idle Mode Entry State Change Response messages received on R4 interface	Int32
r4imentstacharsp-totacc	The total number of R4 Idle Mode Entry State Change Response messages accepted on R4 interface.	Int32
r4imentstacharsp-totrelay	The total number of R4 Idle Mode Entry State Change Response messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Idle Mode Entry State Change Response message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4imentstacharsp-totdenied	The total number of R4 Idle Mode Entry State Change Response messages denied on R4 interface.	Int32
r4imentstacharsp-totdiscard	The total number of R4 Idle Mode Entry State Change Response messages discarded on R4 interface.	Int32
r4imentstacharsp-badform	The total number of badly formed R4 idle mode entry MS state change response messages on R4 interface.	Int32
r4imentstacharsp-decodeerr	The total number of R4 Idle Mode Entry State Change Response messages on R4 interface with decode error.	Int32
r4imentstacharsp-unspecerr	The total number of R4 Idle Mode Entry State Change Response messages on R4 interface with unspecified error.	Int32
r4imentstacharsp-missmandtlv	The total number of R4 Idle Mode Entry State Change Response messages on R4 interface with missing mandatory TLVs.	Int32
r4imentstacharsp-tlvvalinval	The total number of R4 Idle Mode Entry State Change Response messages on R4 interface with invalid TLV value.	Int32
r4imentstacharsp-unknowntrlv	The total number of R4 Idle Mode Entry State Change Response messages on R4 interface with unknown TLVs.	Int32
r4imentstacharsp-duptlvfound	The total number of R4 Idle Mode Entry State Change Response messages on R4 interface with duplicate TLVs.	Int32
r4imentstacharsp-nosessfound	The total number of R4 Idle Mode Entry State Change Response messages on R4 interface without any session information.	Int32
r4imentstacharsp-admprohibit	The total number of R4 Idle Mode Entry State Change Response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Idle Mode Entry State Change Response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imentstacharsp-noresourcedrop	The total number of R4 Idle Mode Entry State Change Response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Idle Mode Entry State Change Response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32

■ Common Syntax Options

Variables	Description	Data Type
r4imentstacharsp-transiderr	The total number of R4 Idle Mode Entry State Change Response messages on R4 interface with transaction ID errors.	Int32
r4imentstachaack-totsent	The total number of Idle Mode Entry State Change Acknowledgements sent to the ASNGW.	Int32
r4imentstachaack-retranssent	The total number of R4 Idle Mode Entry State Change Acknowledgement messages re-transmitted to the ASNGW on the R4 interface.	Int32
r4imentstachaack-totsendfail	The total number of failures that occurred during transaction id generation and R4 Idle Mode Entry State Change Acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4imentstachaack-totrec	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on R4 interface	Int32
r4imentstachaack-totacc	The total number of R4 Idle Mode Entry State Change Acknowledgement messages accepted on R4 interface by the ASNGW.	Int32
r4imentstachaack-totrelay	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Idle Mode Entry State Change Acknowledgement message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4imentstachaack-totdenied	The total number of R4 Idle Mode Entry State Change Acknowledgement messages denied by the ASNGW on the R4 interface.	Int32
r4imentstachaack-totdiscard	The total number of R4 Idle Mode Entry State Change Acknowledgement messages discarded by the ASNGW on the R4 interface	Int32
r4imentstachaack-badform	The total number of badly formed R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on the R4 interface.	Int32
r4imentstachaack-decodeerr	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on the R4 interface with decode errors.	Int32
r4imentstachaack-unspecerr	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on the R4 interface with unspecified error.	Int32
r4imentstachaack-missmandtlv	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on the R4 interface with missing mandatory TLVs.	Int32
r4imentstachaack-tlvvalinval	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on the R4 interface with invalid TLV value.	Int32
r4imentstachaack-unknowntrlv	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on the R4 interface with unknown TLVs.	Int32
r4imentstachaack-duptlvfound	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on the R4 interface with duplicate TLVs.	Int32
r4imentstachaack-nosessfound	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on the R4 interface without any session information.	Int32

Variables	Description	Data Type
r4imentstachaack-admprohibit	The total number of R4 Idle Mode Entry State Change Acknowledgement messages discarded or denied by the ASNGW on the R4 interface due to admin prohibit. Triggers: Changes every time an R4 Idle Mode Entry State Change Acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services	Int32
r4imentstachaack-noresourcedrop	The total number of R4 Idle Mode Entry State Change Acknowledgement messages discarded or denied by the ASNGW on the R4 interface due to resource unavailability. Triggers: Changes every time an R4 Idle Mode Entry State Change Acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4imentstachaack-transiderr	The total number of R4 Idle Mode Entry State Change Acknowledgement messages received by the ASNGW on the R4 interface with transaction ID errors.	Int32
r4imexitstachareq-totsent	The total number of Idle Mode Exit State Change Requests sent to the ASNGW.	Int32
r4imexitstachareq-retranssent	The total number of R4 Idle Mode Exit State Change Request messages re-transmitted on R4 interface.	Int32
r4imexitstachareq-totsendfail	The total number of R4 idle Mode Exit State Change Request messages sent to the base station. This counter is used to count the error while sending the R4 packets.	Int32
r4imexitstachareq-totrec	The total number of R4 Idle Mode Exit State Change Request messages received on R4 interface.	Int32
r4imexitstachareq-totacc	The total number of R4 Idle Mode Exit State Change Request messages accepted on R4 interface.	Int32
r4imexitstachareq-totrelay	The total number of R4 Idle Mode Exit State Change Request messages relayed to the base station on the R4 interface. Triggers: Changes every time an R4 Idle Mode Exit State Change Request message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4imexitstachareq-totdenied	The total number of R4 Idle Mode Exit State Change Request messages denied on R4 interface.	Int32
r4imexitstachareq-totdiscard	The total number of R4 Idle Mode Exit State Change Request messages discarded on R4 interface.	Int32
r4imexitstachareq-badform	The total number of badly formed R4 Idle Mode Exit State Change Request messages on R4 interface.	Int32
r4imexitstachareq-decodeerr	The total number of R4 Idle Mode Exit State Change Request messages on R4 interface with decode error.	Int32
r4imexitstachareq-unspecerr	The total number of R4 Idle Mode Exit State Change Request messages on R4 interface with unspecified error.	Int32
r4imexitstachareq-missmandtlv	The total number of R4 Idle Mode Exit State Change Request messages on R4 interface with missing mandatory TLVs.	Int32
r4imexitstachareq-tlvvalinval	The total number of R4 Idle Mode Exit State Change Request messages on R4 interface with invalid TLV value	Int32

■ Common Syntax Options

Variables	Description	Data Type
r4imexitstachareq-unknowntrlv	The total number of R4 Idle Mode Exit State Change Request messages on R4 interface with unknown TLVs	Int32
r4imexitstachareq-duptlvfound	The total number of R4 Idle Mode Exit State Change Request messages on R4 interface with duplicate TLVs.	Int32
r4imexitstachareq-nosessfound	The total number of R4 Idle Mode Exit State Change Request messages on R4 interface without any session information.	Int32
r4imexitstachareq-admprohibit	The total number of R4 Idle Mode Exit State Change Request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Idle Mode Exit State Change Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imexitstachareq-noresourcedrop	The total number of R4 Idle Mode Exit State Change Request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Idle Mode Exit State Change Request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4imexitstachareq-transiderr	The total number of R4 Idle Mode Exit State Change Request messages on R4 interface with transaction ID errors.	Int32
r4imexitstacharsp-totsent	The total number of Idle Mode Exit State Change Responses sent to the Base Station.	Int32
r4imexitstacharsp-retranssent	The total number of R4 Idle Mode Exit State Change Response messages re-transmitted on R4 interface.	Int32
r4imexitstacharsp-totsendfail	The total number of failed R4 idle Mode Exit State Change Response messages sent to the base station. This counter is used to count the error while sending the R4 packets.	Int32
r4imexitstacharsp-totrec	The total number of R4 Idle Mode Exit State Change Response messages received on R4 interface.	Int32
r4imexitstacharsp-totacc	The total number of R4 Idle Mode Exit State Change Response messages accepted on R4 interface.	Int32
r4imexitstacharsp-totrelay	The total number of R4 Idle Mode Exit State Change Response messages relayed to the base station on the R4 interface. Triggers: Changes every time an R4 Idle Mode Exit State Change Response message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4imexitstacharsp-totdenied	The total number of R4 Idle Mode Exit State Change Response messages denied on R4 interface.	Int32
r4imexitstacharsp-totdiscard	The total number of R4 Idle Mode Exit State Change Response messages discarded on R4 interface.	Int32
r4imexitstacharsp-badform	The total number of badly formed R4 Idle Mode Exit State Change Response messages on R4 interface.	Int32
r4imexitstacharsp-decodeerr	The total number of R4 Idle Mode Exit State Change Response messages on R4 interface with decode error.	Int32

Variables	Description	Data Type
r4imexitstacharsp-unspecerr	The total number of R4 Idle Mode Exit State Change Response messages on R4 interface with unspecified error.	Int32
r4imexitstacharsp-missmandtlv	The total number of R4 Idle Mode Exit State Change Response messages on R4 interface with missing mandatory TLVs.	Int32
r4imexitstacharsp-tlvvalinval	The total number of R4 Idle Mode Exit State Change Response messages on R4 interface with an invalid TLV value.	Int32
r4imexitstacharsp-unknowntrlv	The total number of R4 Idle Mode Exit State Change Response messages on R4 interface with unknown TLVs.	Int32
r4imexitstacharsp-duptlvfound	The total number of R4 Idle Mode Exit State Change Response messages on R4 interface with duplicate TLVs.	Int32
r4imexitstacharsp-nosessfound	The total number of R4 Idle Mode Exit State Change Response messages with no session information.	Int32
r4imexitstacharsp-admprohibit	The total number of R4 Idle Mode Exit State Change Response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Idle Mode Exit State Change Response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4imexitstacharsp-noresourcedrop	The total number of R4 Idle Mode Exit State Change Response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Idle Mode Exit State Change Response message is discarded or denied due to resource unavailability. Availability: across all ASNGW services.	Int32
r4imexitstacharsp-transiderr	The total number of R4 Idle Mode Exit State Change Response messages with translation ID errors.	Int32
r4inipagreq-totsent	The total number of Initial Paging Requests sent to the ASNGW.	Int32
r4inipagreq-retranssent	The total number of R4 Initial Paging Request messages re-transmitted on R4 interface.	Int32
r4inipagreq-totsendfail	The total number of failures occurred during transaction id generation and R4 Initial Paging Request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4inipagreq-totrec	The total number of R4 Initial Paging Request messages received on R4 interface.	Int32
r4inipagreq-totacc	The total number of R4 Initial Paging Request messages accepted on R4 interface.	Int32
r4inipagreq-totrelay	The total number of R4 Initial Paging Request messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Initial Paging Request message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4inipagreq-totdenied	The total number of R4 Initial Paging Request messages denied on R4 interface.	Int32
r4inipagreq-totdiscard	The total number of R4 Initial Paging Request messages discarded on R4 interface.	Int32
r4inipagreq-badform	The total number of badly formed R4 Initial Paging Request messages on R4 interface.	Int32
r4inipagreq-decodeerr	The total number of R4 Initial Paging Request messages on R4 interface with decode error.	Int32

Variables	Description	Data Type
r4inipagreq-unspecerr	The total number of R4 Initial Paging Request messages on R4 interface with unspecified error.	Int32
r4inipagreq-missmandtlv	The total number of R4 Initial Paging Request messages on R4 interface with missing mandatory TLVs.	Int32
r4inipagreq-tlvvalinval	The total number of R4 Initial Paging Request messages on R4 interface with invalid TLV value.	Int32
r4inipagreq-unknownltlv	The total number of R4 Initial Paging Request messages on R4 interface with unknown TLVs.	Int32
r4inipagreq-duptlvfound	The total number of R4 Initial Paging Request messages on R4 interface with duplicate TLVs.	Int32
r4inipagreq-nosessfound	The total number of R4 Initial Paging Request messages on R4 interface without any session information.	Int32
r4inipagreq-admprohibit	The total number of R4 Initial Paging Request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Initial Paging Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4inipagreq-noresourcedrop	The total number of R4 Initial Paging Request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Initial Paging Request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4inipagreq-transiderr	The total number of R4 Initial Paging Request messages on R4 interface with transaction ID errors.	Int32
r4inipagrsp-totsent	The total number of Initiate Paging Responses sent to the ASNGW.	Int32
r4inipagrsp-retranssent	The total number of R4 Initial Paging Response messages re-transmitted on R4 interface.	Int32
r4inipagrsp-totsefail	The total number of failures occurred during transaction id generation and R4 Initial Paging Response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4inipagrsp-totrec	The total number of R4 Initial Paging Response messages received on R4 interface.	Int32
r4inipagrsp-totacc	The total number of R4 Initial Paging Response messages accepted on R4 interface.	Int32
r4inipagrsp-totrelay	The total number of R4 Initial Paging Response messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Initial Paging Response message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4inipagrsp-totdenied	The total number of R4 Initial Paging Response messages denied on R4 interface	Int32
r4inipagrsp-totdiscard	The total number of R4 Initial Paging Response messages discarded on R4 interface.	Int32
r4inipagrsp-badform	The total number of badly formed R4 Initial Paging Response messages on R4 interface.	Int32

Variables	Description	Data Type
r4inipagrsp-decodeerr	The total number of R4 Initial Paging Response messages on R4 interface with decode error.	Int32
r4inipagrsp-unspecerr	The total number of R4 Initial Paging Response messages on R4 interface with unspecified error.	Int32
r4inipagrsp-missmandtlv	The total number of R4 Initial Paging Response messages on R4 interface with missing mandatory TLVs.	Int32
r4inipagrsp-tlvvalinval	The total number of R4 Initial Paging Response messages on R4 interface with invalid TLV value.	Int32
r4inipagrsp-unknowntrlv	The total number of R4 Initial Paging Response messages on R4 interface with unknown TLVs.	Int32
r4inipagrsp-duptlvfound	The total number of R4 Initial Paging Response messages on R4 interface with duplicate TLVs.	Int32
r4inipagrsp-nosessfound	The total number of R4 Initial Paging Response messages on R4 interface without any session information.	Int32
r4inipagrsp-admprohibit	The total number of R4 Initial Paging Response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Initial Paging Response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4inipagrsp-noresourcedrop	The total number of R4 Initial Paging Response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Initial Paging Response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4inipagrsp-transiderr	The total number of R4 Initial Paging Response messages on R4 interface with transaction ID errors.	Int32
r4nwexitmsstachareq-totsent	The total number of Network Exit MS State Change Requests sent to the ASNGW.	Int32
r4nwexitmsstachareq-retranssent	The total number of Network Exit MS State Change Request messages re-transmitted on the R4 interface.	Int32
r4nwexitmsstachareq-totsefail	The total number of failures occurred during transaction ID generation and R4 Network Exit MS State Change Request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4nwexitmsstachareq-totrec	The total number of Network Exit MS State Change Request messages received on R4 interface	Int32
r4nwexitmsstachareq-totacc	The total number of Network Exit MS State Change Request messages accepted on R4 interface	Int32
r4nwexitmsstachareq-totrelay	The total number of Network Exit MS State Change Request messages received from the base station and relayed on the R4 interface. Triggers: Changes every time a Network Exit MS State Change Request message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32

■ Common Syntax Options

Variables	Description	Data Type
r4nwexitmsstachareq-totdenied	The total number of Network Exit MS State Change Request messages denied on R4 interface.	Int32
r4nwexitmsstachareq-totdiscard	The total number of Network Exit MS State Change Request messages discarded on R4 interface.	Int32
r4nwexitmsstachareq-badform	The total number of badly formed Network Exit MS State Change Request messages on R4 interface.	Int32
r4nwexitmsstachareq-decodeerr	The total number of Network Exit MS State Change Request messages on R4 interface with decode error.	Int32
r4nwexitmsstachareq-unspecerr	The total number of Network Exit MS State Change Request messages on R4 interface with unspecified error.	Int32
r4nwexitmsstachareq-missmandtlv	The total number of Network Exit MS State Change Request messages on R4 interface with missing mandatory TLVs.	Int32
r4nwexitmsstachareq-tlvvalinval	The total number of Network Exit MS State Change Request messages on R4 interface with invalid TLV value.	Int32
r4nwexitmsstachareq-unknowntlv	The total number of Network Exit MS State Change Request messages on R4 interface with unknown TLVs.	Int32
r4nwexitmsstachareq-dupltlvfound	The total number of Network Exit MS State Change Request messages on R4 interface with duplicate TLVs.	Int32
r4nwexitmsstachareq-nosessfound	The total number of Network Exit MS State Change Request messages on R4 interface without any session information.	Int32
r4nwexitmsstachareq-admprohibit	The total number of Network Exit MS State Change Request messages on R4 interface with transaction ID errors.	Int32
r4nwexitmsstachareq-noresourcedrop	The total number of Network Exit MS State Change Request messages discarded or denied due to admin prohibit. Triggers: Changes every time a Network Exit MS State Change Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4nwexitmsstachareq-transiderr	The total number of Network Exit MS State Change Request messages discarded or denied due to transaction ID errors.	Int32
r4nwexitmsstacharsp-totsent	The total number of Network Exit MS State Change Responses sent to the ASNGW.	Int32
r4nwexitmsstacharsp-retranssent	The total number of Network Exit MS State Change Response messages re-transmitted on R4 interface.	Int32
r4nwexitmsstacharsp-totsendfail	The total number of Network Exit MS State Change Response failures that occurred during transaction ID generation and R4 Network Exit MS State Change Response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4nwexitmsstacharsp-totrec	The total number of Network Exit MS State Change Response messages received on R4 interface.	Int32
r4nwexitmsstacharsp-totacc	The total number of Network Exit MS State Change Response messages accepted on R4 interface.	Int32

Variables	Description	Data Type
r4nwexitmsstacharsp-totrelay	The total number of Network Exit MS State Change Response messages received from the base station and relayed on the R4 interface. Triggers: Changes every time a Network Exit MS State Change Response message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4nwexitmsstacharsp-totdenied	The total number of Network Exit MS State Change Response messages denied on R4 interface.	Int32
r4nwexitmsstacharsp-totdiscard	The total number of Network Exit MS State Change Response messages discarded on R4 interface.	Int32
4nwexitmsstacharsp-badform	The total number of badly formed Network Exit MS State Change Response messages on R4 interface.	Int32
r4nwexitmsstacharsp-decodeerr	The total number of Network Exit MS State Change Response messages on R4 interface with decode error.	Int32
r4nwexitmsstacharsp-unspecerr	The total number of Network Exit MS State Change Response messages on R4 interface with unspecified error.	Int32
r4nwexitmsstacharsp-missmandtlv	The total number of Network Exit MS State Change Response messages on R4 interface with missing mandatory TLVs.	Int32
r4nwexitmsstacharsp-tlvvalinval	The total number of Network Exit MS State Change Response messages on R4 interface with invalid TLV value.	Int32
r4nwexitmsstacharsp-unknowntrlv	The total number of Network Exit MS State Change Response messages on R4 interface with unknown TLVs.	Int32
r4nwexitmsstacharsp-duptrlvfound	The total number of Network Exit MS State Change Response messages on R4 interface with duplicate TLVs.	Int32
r4nwexitmsstacharsp-nosessfound	The total number of Network Exit MS State Change Response messages on R4 interface without any session information.	Int32
r4nwexitmsstacharsp-admprohibit	The total number of Network Exit MS State Change Response messages discarded or denied due to admin prohibit. Triggers: Changes every time a Network Exit MS State Change Response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4nwexitmsstacharsp-noresourcedrop	The total number of Network Exit MS State Change Response messages discarded or denied due to resource unavailability. Triggers: Changes every time a Network Exit MS State Change Response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service.	Int32
r4nwexitmsstacharsp-transiderr	The total number of Network Exit MS State Change Response messages on R4 interface with transaction ID errors.	Int32
r4delmsentreq-totsent	The total number of Delete MS Entry Requests sent to the ASNGW on the R4 interface.	Int32
r4delmsentreq-retranssent	The total number of R4 Delete MS Entry Request messages re-transmitted on R4 interface	Int32

Variables	Description	Data Type
r4delmsentreq-totsendfail	The total number of failures occurred during transaction id generation and R4 DeleteMS Entry Request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4delmsentreq-totrec	The total number of R4 DeleteMS Entry Request messages received on R4 interface.	Int32
r4delmsentreq-totacc	The total number of R4 DeleteMS Entry Request messages accepted on R4 interface	Int32
r4delmsentreq-totrelay	The total number of R4 DeleteMS Entry Request messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Delete MS Entry Request message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4delmsentreq-totdenied	The total number of R4 DeleteMS Entry Request messages denied on R4 interface.	Int32
r4delmsentreq-totdiscard	The total number of R4 DeleteMS Entry Request messages discarded on R4 interface.	Int32
r4delmsentreq-badform	The total number of badly formed R4 DeleteMS Entry Request messages on R4 interface.	Int32
r4delmsentreq-decodeerr	The total number of R4 DeleteMS Entry Request messages on R4 interface with decode error.	Int32
r4delmsentreq-unspecerr	The total number of R4 DeleteMS Entry Request messages on R4 interface with unspecified error.	Int32
r4delmsentreq-missmandtlv	The total number of R4 DeleteMS Entry Request messages on R4 interface with missing mandatory TLVs.	Int32
r4delmsentreq-tlvvalinval	The total number of R4 DeleteMS Entry Request messages on R4 interface with invalid TLV value.	Int32
r4delmsentreq-unknowntrlv	The total number of R4 DeleteMS Entry Request messages on R4 interface with unknown TLVs.	Int32
r4delmsentreq-duptlvfound	The total number of R4 DeleteMS Entry Request messages on R4 interface with duplicate TLVs.	Int32
r4delmsentreq-nosessfound	The total number of R4 DeleteMS Entry Request messages on R4 interface without any session information.	Int32
r4delmsentreq-admprohibit	The total number of R4 DeleteMS Entry Request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Delete MS Entry Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4delmsentreq-noresourcedrop	The total number of R4 DeleteMS Entry Request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Delete MS Entry Request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4delmsentreq-transiderr	The total number of R4 DeleteMS Entry Request messages on R4 interface with transaction ID errors.	Int32
r4delmsentrsp-totsent	The total number of Delete MS Entry Responses sent to the ASNGW.	Int32

Variables	Description	Data Type
r4delmsentrsp-retranssent	The total number of R4 DeleteMS Entry Response messages retransmitted on the R4 interface.	Int32
r4delmsentrsp-totsendfail	The total number of failures occurred during transaction id generation and R4 DeleteMS Entry Response message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4delmsentrsp-totrec	The total number of R4 DeleteMS Entry Response messages received on R4 interface.	Int32
r4delmsentrsp-totacc	The total number of R4 DeleteMS Entry Response messages accepted on the R4 interface.	Int32
r4delmsentrsp-totrelay	The total number of R4 DeleteMS Entry Response messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Delete MS Entry Response message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4delmsentrsp-totdenied	The total number of R4 DeleteMS Entry Response messages denied on R4 interface.	Int32
r4delmsentrsp-totdiscard	The total number of R4 DeleteMS Entry Response messages discarded on R4 interface.	Int32
r4delmsentrsp-badform	The total number of badly formed R4 DeleteMS Entry Response messages on R4 interface.	Int32
r4delmsentrsp-decodeerr	The total number of R4 DeleteMS Entry Response messages on R4 interface with decode error.	Int32
r4delmsentrsp-unspecerr	The total number of R4 DeleteMS Entry Response messages on R4 interface with unspecified error.	Int32
r4delmsentrsp-missmandtlv	The total number of R4 DeleteMS Entry Response messages on R4 interface with missing mandatory TLVs.	Int32
r4delmsentrsp-tlvvalinval	The total number of R4 DeleteMS Entry Response messages on R4 interface with invalid TLV value.	Int32
r4delmsentrsp-unknowntrlv	The total number of R4 DeleteMS Entry Response messages on R4 interface with unknown TLVs.	Int32
r4delmsentrsp-duptlvfound	The total number of R4 DeleteMS Entry Response messages on R4 interface with duplicate TLVs.	Int32
r4delmsentrsp-nosessfound	The total number of R4 DeleteMS Entry Response messages on R4 interface without any session information.	Int32
r4delmsentrsp-admprohibit	The total number of R4 DeleteMS Entry Response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Delete MS Entry Response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4delmsentrsp-noresourcedrop	The total number of R4 DeleteMS Entry Response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Delete MS Entry Response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4delmsentrsp-transiderr	The total number of R4 DeleteMS Entry Response messages on R4 interface with transaction ID errors.	Int32

Variables	Description	Data Type
r4anchorpcind-totsent	The total number of Anchor Paging Controller Indicator messages sent to the ASNGW on the R4 interface.	Int32
r4anchorpcind-retranssent	The total number of R4 Anchor Paging Controller Indicator messages re-transmitted on R4 interface.	Int32
r4anchorpcind-totsendfail	The total number of failures occurred during transaction id generation and R4 Anchor Paging Controller Indicator message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4anchorpcind-totrec	The total number of R4 Anchor Paging Controller Indicator messages received on R4 interface.	Int32
r4anchorpcind-totacc	The total number of R4 Anchor Paging Controller Indicator messages accepted on R4 interface.	Int32
r4anchorpcind-totrelay	The total number of R4 Anchor Paging Controller Indicator messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Anchor Paging Controller Indicator message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4anchorpcind-totdenied	The total number of R4 Anchor Paging Controller Indicator messages denied on R4 interface.	Int32
r4anchorpcind-totdiscard	The total number of R4 Anchor Paging Controller Indicator messages discarded on R4 interface.	Int32
r4anchorpcind-badform	The total number of badly formed R4 Anchor Paging Controller Indicator messages on R4 interface.	Int32
r4anchorpcind-decodeerr	The total number of R4 Anchor Paging Controller Indicator messages on R4 interface with decode error.	Int32
r4anchorpcind-unspecerr	The total number of R4 Anchor Paging Controller Indicator messages on R4 interface with unspecified error.	Int32
r4anchorpcind-missmandtlv	The total number of R4 Anchor Paging Controller Indicator messages on R4 interface with missing mandatory TLVs.	Int32
r4anchorpcind-tlvvalinval	The total number of R4 Anchor Paging Controller Indicator messages on R4 interface with invalid TLV value.	Int32
r4anchorpcind-unknowntrlv	The total number of R4 Anchor Paging Controller Indicator messages on R4 interface with unknown TLVs.	Int32
r4anchorpcind-duptlvfound	The total number of R4 Anchor Paging Controller Indicator messages on R4 interface with duplicate TLVs.	Int32
r4anchorpcind-nosessfound	The total number of R4 Anchor Paging Controller Indicator messages on R4 interface without any session information.	Int32
r4anchorpcind-admprohibit	The total number of R4 Anchor Paging Controller Indicator messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Anchor Paging Controller Indicator message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r4anchorpcind-noresourcedrop	The total number of R4 Anchor Paging Controller Indicator messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Anchor Paging Controller Indicator message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4anchorpcind-transiderr	The total number of R4 Anchor Paging Controller Indicator messages on R4 interface with transaction ID errors.	Int32
r4anchorpcack-totsent	The total number of Anchor Paging Controller Acknowledgements sent to the ASNGW.	Int32
r4anchorpcack-retranssent	The total number of R4 Anchor Paging Controller Acknowledgement messages re-transmitted on R4 interface.	Int32
r4anchorpcack-totsendfail	The total number of failures occurred during transaction id generation and R4 Anchor Paging Controller Acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4anchorpcack-totrec	The total number of R4 Anchor Paging Controller Acknowledgement messages received on R4 interface.	Int32
r4anchorpcack-totacc	The total number of R4 Anchor Paging Controller Acknowledgement messages accepted on R4 interface.	Int32
r4anchorpcack-totrelay	The total number of R4 Anchor Paging Controller Acknowledgement messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Anchor Paging Controller Acknowledgement message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4anchorpcack-totdenied	The total number of R4 Anchor Paging Controller Acknowledgement messages denied on R4 interface.	Int32
r4anchorpcack-totdiscard	The total number of R4 Anchor Paging Controller Acknowledgement messages discarded on R4 interface.	Int32
r4anchorpcack-badform	The total number of badly formed R4 Anchor Paging Controller Acknowledgement messages on R4 interface.	Int32
r4anchorpcack-decodeerr	The total number of R4 Anchor Paging Controller Acknowledgement messages on R4 interface with decode error.	Int32
r4anchorpcack-unspecerr	The total number of R4 Anchor Paging Controller Acknowledgement messages on R4 interface with unspecified error.	Int32
r4anchorpcack-missmandtlv	The total number of R4 Anchor Paging Controller Acknowledgement messages on R4 interface with missing mandatory TLVs.	Int32
r4anchorpcack-tlvvalinval	The total number of R4 Anchor Paging Controller Acknowledgement messages on R4 interface with invalid TLV value.	Int32
r4anchorpcack-unknowntrlv	The total number of R4 Anchor Paging Controller Acknowledgement messages on R4 interface with unknown TLVs.	Int32
r4anchorpcack-duptlvfound	The total number of R4 Anchor Paging Controller Acknowledgement messages on R4 interface with duplicate TLVs.	Int32

Variables	Description	Data Type
r4anchorpack-nosessfound	The total number of R4 Anchor Paging Controller Acknowledgement messages on R4 interface without any session information.	Int32
r4anchorpack-adminprohib	The total number of R4 Anchor Paging Controller Acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Anchor Paging Controller Acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4anchorpack-noresourcedrop	The total number of R4 Anchor Paging Controller Acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Anchor Paging Controller Acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4anchorpack-transiderr	The total number of R4 Anchor Paging Controller Acknowledgement messages on R4 interface with transaction ID errors.	Int32
r4locupdrej-totsent	The total number of Location Update Requests sent to the peer ASNPC over the R4 interface.	Int32
r4locupdrej-retranssent	The total number of R4 Location Update Request messages re-transmitted on R4 interface.	Int32
r4locupdrej-totsefail	The total number of failures occurred during transaction id generation and R4 Location Update Request messages not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4locupdrej-totrec	The total number of R4 Location Update Request messages received on R4 interface.	Int32
r4locupdrej-totacc	The total number of R4 Location Update Request messages accepted on R4 interface.	Int32
r4locupdrej-totrelay	The total number of R4 Location Update Request messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Location Update Request message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4locupdrej-totdenied	The total number of R4 Location Update Request messages denied on R4 interface.	Int32
r4locupdrej-totdiscard	The total number of R4 Location Update Request messages discarded on R4 interface.	Int32
r4locupdrej-badform	The total number of badly formed R4 Location Update Request messages on R4 interface.	Int32
r4locupdrej-decodeerr	The total number of R4 Location Update Request messages on R4 interface with decode error.	Int32
r4locupdrej-unspecerr	The total number of R4 Location Update Request messages on R4 interface with unspecified error.	Int32
r4locupdrej-missmandtlv	The total number of R4 Location Update Request messages on R4 interface with missing mandatory TLVs.	Int32
r4locupdrej-tlvvalinval	The total number of R4 Location Update Request messages on R4 interface with invalid TLV value.	Int32
r4locupdrej-unknowntrlv	The total number of R4 Location Update Request messages on R4 interface with unknown TLVs.	Int32

Variables	Description	Data Type
r4locupdreql-dupltyfound	The total number of R4 Location Update Request messages on R4 interface with duplicate TLVs.	Int32
r4locupdreql-nosessfound	The total number of R4 Location Update Request messages on R4 interface without any session information.	Int32
r4locupdreql-admprohibit	The total number of R4 Location Update Request messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Location Update Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4locupdreql-noresourcedrop	The total number of R4 Location Update Request messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Location Update Request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4locupdreql-transiderr	The total number of R4 Location Update Request messages on R4 interface with transaction ID errors.	Int32
r4locupdrsp-totsent	The total number of Location Update Responses sent to the peer ASNPC.	Int32
r4locupdrsp-retranssent	The total number of R4 Location Update Response messages re-transmitted on R4 interface.	Int32
r4locupdrsp-totsendfail	The total number of failures occurred during transaction id generation and R4 Location Update Response messages not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4locupdrsp-totrec	The total number of R4 Location Update Response messages received on R4 interface.	Int32
r4locupdrsp-totacc	The total number of R4 Location Update Response messages accepted on R4 interface.	Int32
r4locupdrsp-totrelay	The total number of R4 Location Update Response messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Location Update Response message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4locupdrsp-totdenied	The total number of R4 Location Update Response messages denied on R4 interface.	Int32
r4locupdrsp-totdiscard	The total number of R4 Location Update Response messages discarded on R4 interface.	Int32
r4locupdrsp-badform	The total number of badly formed R4 Location Update Response messages on R4 interface.	Int32
r4locupdrsp-decodeerr	The total number of R4 Location Update Response messages on R4 interface with decode error.	Int32
r4locupdrsp-unspecerr	The total number of R4 Location Update Response messages on R4 interface with unspecified error.	Int32
r4locupdrsp-mismandtlv	The total number of R4 Location Update Response messages on R4 interface with missing mandatory TLVs.	Int32
r4locupdrsp-tlvvalinval	The total number of R4 Location Update Response messages on R4 interface with invalid TLV value.	Int32

Variables	Description	Data Type
r4locupdrsp-unknowntlv	The total number of R4 Location Update Response messages on R4 interface with unknown TLVs.	Int32
r4locupdrsp-duptlvfound	The total number of R4 Location Update Response messages on R4 interface with duplicate TLVs.	Int32
r4locupdrsp-nosessfound	The total number of R4 Location Update Response messages on R4 interface without any session information.	Int32
r4locupdrsp-admprohibit	The total number of R4 Location Update Response messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Location Update Response message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4locupdrsp-noresourcedrop	The total number of R4 Location Update Response messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Location Update Response message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4locupdrsp-transiderr	The total number of R4 Location Update Response messages on R4 interface with transaction ID errors.	Int32
r4locupdcnf-totsent	The total number of Location Update Confirmations sent to the peer ASNPC.	Int32
r4locupdcnf-retranssent	The total number of R4 Location Update Confirmation messages re-transmitted on R4 interface.	Int32
r4locupdcnf-totsend fail	The total number of failures occurred during transaction id generation and R4 Location Update Confirmation messages not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4locupdcnf-totrec	The total number of R4 Location Update Confirmation messages received on R4 interface.	Int32
r4locupdcnf-totacc	The total number of R4 Location Update Confirmation messages accepted on R4 interface.	Int32
r4locupdcnf-totrelay	The total number of R4 Location Update Confirmation messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Location Update Confirmation message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4locupdcnf-totdenied	The total number of R4 Location Update Confirmation messages denied on R4 interface.	Int32
r4locupdcnf-totdiscard	The total number of R4 Location Update Confirmation messages discarded on R4 interface.	Int32
r4locupdcnf-badform	The total number of badly formed R4 Location Update Confirmation messages on R4 interface.	Int32
r4locupdcnf-decodeerr	The total number of R4 Location Update Confirmation messages on R4 interface with decode error.	Int32
r4locupdcnf-unspecerr	The total number of R4 Location Update Confirmation messages on R4 interface with unspecified error.	Int32
r4locupdcnf-missmandtlv	The total number of R4 Location Update Confirmation messages on R4 interface with missing mandatory TLVs.	Int32

Variables	Description	Data Type
r4locupdcnf-tlvvalinval	The total number of R4 Location Update Confirmation messages on R4 interface with invalid TLV value.	Int32
r4locupdcnf-unknowntrlv	The total number of R4 Location Update Confirmation messages on R4 interface with unknown TLVs.	Int32
r4locupdcnf-duptlvfound	The total number of R4 Location Update Confirmation messages on R4 interface with duplicate TLVs.	Int32
r4locupdcnf-nosessfound	The total number of R4 Location Update Confirmation messages on R4 interface without any session information.	Int32
r4locupdcnf-admprohibit	The total number of R4 Location Update Confirmation messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Location Update Confirmation message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4locupdcnf-noresourcedrop	The total number of R4 Location Update Confirmation messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Location Update Confirmation message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4locupdcnf-transiderr	The total number of R4 Location Update Confirmation messages on R4 interface with transaction ID errors.	Int32
r4prelocind-totsent	The total number of PC Relocation Indicator messages sent to the ASNGW on the R4 interface.	Int32
r4prelocind-retranssent	The total number of R4 PC Relocation Indicator messages re-transmitted on R4 interface.	Int32
r4prelocind-totsendfail	The total number of failures occurred during transaction id generation and R4 PC Relocation Indicator messages not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4prelocind-totrec	The total number of R4 PC Relocation Indicator messages received on R4 interface.	Int32
r4prelocind-totacc	The total number of R4 PC Relocation Indicator messages accepted on R4 interface.	Int32
r4prelocind-totrelay	The total number of R4 PC Relocation Indicator messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 PC Relocation Indicator message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4prelocind-totdenied	The total number of R4 PC Relocation Indicator messages denied on R4 interface.	Int32
r4prelocind-totdiscard	The total number of R4 PC Relocation Indicator messages discarded on R4 interface.	Int32
r4prelocind-badform	The total number of badly formed R4 PC Relocation Indicator messages on R4 interface.	Int32
r4prelocind-decodeerr	The total number of R4 PC Relocation Indicator messages on R4 interface with decode error.	Int32
r4prelocind-unspecerr	The total number of R4 PC Relocation Indicator messages on R4 interface with unspecified error.	Int32

Variables	Description	Data Type
r4pcrelocind-mismandtlv	The total number of R4 PC Relocation Indicator messages on R4 interface with missing mandatory TLVs.	Int32
r4pcrelocind-tlvvalinval	The total number of R4 PC Relocation Indicator messages on R4 interface with invalid TLV value.	Int32
r4pcrelocind-unknowntrlv	The total number of R4 PC Relocation Indicator messages on R4 interface with unknown TLVs.	Int32
r4pcrelocind-duptlvfound	The total number of R4 PC Relocation Indicator messages on R4 interface with duplicate TLVs.	Int32
r4pcrelocind-nosessfound	The total number of R4 PC Relocation Indicator messages on R4 interface without any session information.	Int32
r4pcrelocind-admprohibit	The total number of R4 PC Relocation Indicator messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 PC Relocation Indicator message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4pcrelocind-noresourcedrop	The total number of R4 PC Relocation Indicator messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 PC Relocation Indicator message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4pcrelocind-transiderr	The total number of R4 PC Relocation Indicator messages on R4 interface with transaction ID errors.	Int32
r4pcrelocack-totsent	The total number of PC Relocation Acknowledgement messages sent to the ASNGW.	Int32
r4pcrelocack-retranssent	The total number of PC Relocation Acknowledgement messages retransmitted on the R4 interface to the ASNGW.	Int32
r4pcrelocack-totsendfail	The total number of PC Relocation Acknowledgement message failures sent to the ASNGW and relayed on the R4 interface. This counter is used to count the error while sending the R4 packets.	Int32
r4pcrelocack-totrec	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW.	Int32
r4pcrelocack-totacc	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW	Int32
r4pcrelocack-totrelay	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW and relayed on the R4 interface. Triggers: Changes every time an R4 Idle Mode Exit State Indication message is relayed by the R4 interface. Availability: across all ASNGW services	Int32
r4pcrelocack-totdenied	The total number of PC Relocation Acknowledgement messages sent to the ASNGW that were denied on the R4 interface	Int32
r4pcrelocack-totdiscard	The total number of PC Relocation Acknowledgement messages sent to the ASNGW that were discarded on the R4 interface.	Int32
r4pcrelocack-badform	The total number of badly formed R4 PC Relocation Acknowledgement messages sent to the ASNGW.	Int32

Variables	Description	Data Type
r4pcrelocack-decodeerr	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW with decode errors.	Int32
r4pcrelocack-unspecerr	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW with unspecified errors.	Int32
r4pcrelocack-missmandtlv	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW with missing mandatory TLVs.	Int32
r4pcrelocack-tlvvalinval	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW with an invalid TLV.	Int32
r4pcrelocack-unknowntrlv	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW with an unknown TLV.	Int32
r4pcrelocack-duptlvfound	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW with duplicate TLVs.	Int32
r4pcrelocack-nosessfound	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW without any session information.	Int32
r4pcrelocack-admprohibit	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW that were discarded or denied due to admin prohibit. Triggers: Changes every time an R4 PC Relocation Acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASN GW services.	Int32
r4pcrelocack-noresourcedrop	The total number of R4 PC Relocation Acknowledgement messages sent to the ASNGW that were discarded or denied due to resource unavailability. Triggers: Changes every time an R4 PC Relocation Acknowledgement message is discarded or denied due to resource unavailability. Availability: across all ASN GW services.	Int32
r4pcrelocack-transiderr	The total number of R4 IPC Relocation Acknowledgement messages sent to the ASNGW with a transaction ID error.	Int32
r4contextreq-totsent	The total number of Context Request messages sent to the ASNGW.	Int32
r4contextreq-retranssent	The total number of Context Request messages re-transmitted to the ASNGW on R4 interface.	Int32
r4contextreq-totsendfail	The total number of failures that occurred during transaction ID generation and R4 Context Request message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4contextreq-totrec	The total number of Context Request messages received by the ASNGW on R4 interface.	Int32
r4contextreq-totacc	The total number of Context Request messages accepted by the ASNGW on R4 interface.	Int32
r4contextreq-totrelay	The total number of Context Request messages received on the ASNGW from the base station and relayed on the R4 interface. Triggers: Changes every time a Context Request message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4contextreq-totdenied	The total number of Context Request messages denied by the ASNGW on R4 interface.	Int32
r4contextreq-totdiscard	The total number of Context Request messages discarded by the ASNGW on R4 interface.	Int32

■ Common Syntax Options

Variables	Description	Data Type
r4contextreq-badform	The total number of badly formed Context Request messages on R4 interface.	Int32
r4contextreq-decodeerr	The total number of Context Request messages on R4 interface with decode error.	Int32
r4contextreq-unspecerr	The total number of Context Request messages on R4 interface with unspecified error.	Int32
r4contextreq-mismandtlv	The total number of Context Request messages on R4 interface with missing mandatory TLVs.	Int32
r4contextreq-tlvvalinval	The total number of Context Request messages on R4 interface with invalid TLV value.	Int32
r4contextreq-unknowntrlv	The total number of Context Request messages on R4 interface with unknown TLVs.	Int32
r4contextreq-duptlvfound	The total number of Context Request messages on R4 interface with duplicate TLV values.	Int32
r4contextreq-nosessfound	The total number of Context Request messages on R4 interface without any session information.	Int32
r4contextreq-adminprohib	The total number of Context Request messages discarded or denied due to admin prohibit. Triggers: Changes every time a Context Request message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4contextreq-noresourcedrop	The total number of Context Request messages discarded or denied due to resource unavailability. Triggers: Changes every time a Context Request message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service.	Int32
r4contextreq-transiderr	The total number of Context Request messages on R4 interface with transaction ID errors.	Int32
r4contextrpt-totsent	The total number of Context Report messages sent to the ASNGW.	Int32
r4contextrpt-retranssent	The total number of Context Report messages re-transmitted to the ASNGW on R4 interface.	Int32
r4contextrpt-totsefail	The total number of failures that occurred during transaction ID generation and R4 Context Report message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4contextrpt-totrec	The total number of Context Report messages received by the ASNGW on R4 interface.	Int32
r4contextrpt-totacc	The total number of Context Report messages accepted by the ASNGW on R4 interface.	Int32
r4contextrpt-totrelay	The total number of Context Report messages received on the ASNGW from the base station and relayed on the R4 interface. Triggers: Changes every time a Context Report message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4contextrpt-totdenied	The total number of Context Report messages denied by the ASNGW on R4 interface.	Int32
r4contextrpt-totdiscard	The total number of Context Report messages discarded by the ASNGW on R4 interface.	Int32
r4contextrpt-badform	The total number of badly formed Context Report messages on R4 interface.	Int32
r4contextrpt-decodeerr	The total number of Context Report messages on R4 interface with decode error.	Int32
r4contextrpt-unspecerr	The total number of Context Report messages on R4 interface with unspecified error.	Int32

Variables	Description	Data Type
r4contextrpt-missmandtlv	The total number of Context Report messages on R4 interface with missing mandatory TLVs.	Int32
r4contextrpt-tlvvalinval	The total number of Context Report messages on R4 interface with invalid TLV value.	Int32
r4contextrpt-unknowntrlv	The total number of Context Report messages on R4 interface with unknown TLVs.	Int32
r4contextrpt-duptlvfound	The total number of Context Report messages on R4 interface with duplicate TLV values.	Int32
r4contextrpt-nosessfound	The total number of Context Report messages on R4 interface without any session information.	Int32
r4contextrpt-adminprohib	The total number of Context Report messages discarded or denied due to admin prohibit. Triggers: Changes every time a Context Report message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4contextrpt-noresourcedrop	The total number of Context Report messages discarded or denied due to resource unavailability. Triggers: Changes every time a Context Report message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service.	Int32
r4contextrpt-transiderr	The total number of Context Report messages on R4 interface with transaction ID errors.	Int32
r4cmackeycountupd-totsent	The total number of CMAC Key Count Update messages sent to the ASNGW.	Int32
r4cmackeycountupd-retranssent	The total number of CMAC Key Count Update messages re-transmitted on R4 inter	Int32
r4cmackeycountupd-totsendfail	The total number of failures occurred during transaction ID generation and R4 CMAC Key Count Update message not sent for specific interface. This counter is used to count the error while sending the R4 packets.	Int32
r4cmackeycountupd-totrec	The total number of CMAC Key Count Update messages received on R4 interface.	Int32
r4cmackeycountupd-totacc	The total number of CMAC Key Count Update messages accepted on R4 interface.	Int32
r4cmackeycountupd-totrelay	The total number of CMAC Key Count Update messages received from the base station and relayed on the R4 interface. Triggers: Changes every time a CMAC Key Count Update message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4cmackeycountupd-totdenied	The total number of CMAC Key Count Update messages denied on R4 interface.	Int32
r4cmackeycountupd-totdiscard	The total number of CMAC Key Count Update messages discarded on R4 interface.	Int32
r4cmackeycountupd-badform	The total number of badly formed CMAC Key Count Update messages on R4 interface.	Int32
r4cmackeycountupd-decodeerr	The total number of CMAC Key Count Update messages on R4 interface with decode error.	Int32

■ Common Syntax Options

Variables	Description	Data Type
r4cmackeycountupd-unspeccerr	The total number ofCMAC Key Count Update messages on R4 interface with unspecified error.	Int32
r4cmackeycountupd-missmandtlv	The total number ofCMAC Key Count Update messages on R4 interface with missing mandatory TLVs.	Int32
r4cmackeycountupd-tlvvalinval	The total number ofCMAC Key Count Update messages on R4 interface with invalid TLV value.	Int32
r4cmackeycountupd-unknownnltv	The total number ofCMAC Key Count Update messages on R4 interface with unknown TLVs.	Int32
r4cmackeycountupd-dupltlvfound	The total number ofCMAC Key Count Update messages on R4 interface with duplicate TLVs.	Int32
r4cmackeycountupd-nosessfound	The total number ofCMAC Key Count Update messages on R4 interface without any session information.	Int32
r4cmackeycountupd-adminprohib	The total number ofCMAC Key Count Update messages discarded or denied due to admin prohibit. Triggers: Changes every time a CMAC Key Count Update message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4cmackeycountupd-noresourcedrop	The total number ofCMAC Key Count Update messages discarded or denied due to resource unavailability. Triggers: Changes every time a CMAC Key Count Update message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4cmackeycountupd-transiderr	The total number ofCMAC Key Count Update messages on R4 interface with transaction ID errors.	Int32
r4cmackeycountack-totsent	The total number ofCMAC Key Count Acknowledgement messages sent to the ASNGW.	Int32
r4cmackeycountack-retranssent	The total number ofCMAC Key Count Acknowledgement messages re-transmitted on R6 interface	Int32
r4cmackeycountack-totsefail	The total number of failures occurred during transaction ID generation and R6 CMAC Key Count Acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets	Int32
r4cmackeycountack-totrec	The total number of failures occurred during transaction ID generation and R6 CMAC Key Count Acknowledgement message not sent for specific interface. This counter is used to count the error while sending the R6 packets	Int32
r4cmackeycountack-totacc	The total number ofCMAC Key Count Acknowledgement messages accepted on R6 interface.	Int32
r4cmackeycountack-totrelay	The total number ofCMAC Key Count Acknowledgement messages received from the base station and relayed on the R6 interface. Triggers: Changes every time a CMAC Key Count Acknowledgement message is relayed by the R6 interface. Availability: across all ASNGW services.	Int32

Variables	Description	Data Type
r4cmackeycountack-totdenied	The total number ofCMAC Key Count Acknowledgement messages denied on R6 interface.	Int32
r4cmackeycountack-totdiscard	The total number ofCMAC Key Count Acknowledgement messages discarded on R6 interface.	Int32
r4cmackeycountack-badform	The total number ofbadly formedCMAC Key Count Acknowledgement messages on R6 interface.	Int32
r4cmackeycountack-decodeerr	The total number ofCMAC Key Count Acknowledgement messages on R6 interface with decode error.	Int32
r4cmackeycountack-unspecerr	The total number ofCMAC Key Count Acknowledgement messages on R6 interface with unspecified error.	Int32
r4cmackeycountack-missmandtlv	The total number ofCMAC Key Count Acknowledgement messages on R6 interface with missing mandatory TLVs.	Int32
r4cmackeycountack-tlvvalinval	The total number ofCMAC Key Count Acknowledgement messages on R6 interface with invalid TLV value.	Int32
r4cmackeycountack-unknowntlv	The total number ofCMAC Key Count Acknowledgement messages on R6 interface with unknown TLVs.	Int32
r4cmackeycountack-duptlvfound	The total number ofCMAC Key Count Acknowledgement messages on R6 interface with duplicate TLVs.	Int32
r4cmackeycountack-nosessfound	The total number ofCMAC Key Count Acknowledgement messages on R6 interface without any session information.	Int32
r4cmackeycountack-adminprohib	The total number ofCMAC Key Count Acknowledgement messages discarded or denied due to admin prohibit. Triggers: Changes every time a CMAC Key Count Acknowledgement message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4cmackeycountack-noresourcedrop	The total number ofCMAC Key Count Acknowledgement messages discarded or denied due to resource unavailability. Triggers: Changes every time a CMAC Key Count Acknowledgement message is discarded or denied due to resource unavailability. Availability: across all the ASNGW services.	Int32
r4cmackeycountack-transiderr	The total number ofCMAC Key Count Acknowledgement messages on R6 interface with transaction ID errors.	Int32
r4unknown-totrec	The total number ofUnknown messages received on the R4 interface.	Int32
r4unknown-totacc	The total number ofUnknown messages accepted on R4 interface.	Int32
r4unknown-totrelay	The total number ofR4 Unknown messages received from the base station and relayed on the R4 interface. Triggers: Changes every time an R4 Unknown message is relayed by the R4 interface. Availability: across all ASNGW services.	Int32
r4unknown-totdenied	The total number ofUnknown messages denied on the R4 interface.	Int32
r4unknown-totdiscard	The total number ofUnknown messages discarded on R4 interface.	Int32

■ Common Syntax Options

Variables	Description	Data Type
r4unknown-badform	The total number of Unknown badly formed messages on the R4 interface.	Int32
r4unknown-decodeerr	The total number of Unknown decode errors on R4 interface.	Int32
r4unknown-unspecerr	The total number of Unknown messages with unspecified errors on R4 interface.	Int32
r4unknown-missmandtlv	The total number of Unknown messages on R4 interface with missing TLVs.	Int32
r4unknown-tlvvalinval	The total number of Unknown messages on R4 interface with invalid TLV values.	Int32
r4unknown-unknowntlv	The total number of Unknown messages on R4 interface with unknown TLVs.	Int32
r4unknown-duptlvfound	The total number of Unknown messages on R4 interface with duplicate TLV values.	Int32
r4unknown-nosessfound	The total number of Unknown messages on R4 interface with no session information.	Int32
r4unknown-admprohibit	The total number of R4 Unknown messages discarded or denied due to admin prohibit. Triggers: Changes every time an R4 Unknown message is discarded or denied due to admin prohibit. Availability: across all ASNGW services.	Int32
r4unknown-noresourcedrop	The total number of R4 Unknown messages discarded or denied due to resource unavailability. Triggers: Changes every time an R4 Unknown message is discarded or denied due to resource unavailability. Availability: across all the ASNGW service	Int32
r4unknown-transiderr	The total number of R4 Unknown messages with transaction ID errors.	Int32
total-sessions-connected	The total number of active sessions currently connected through the ASN PC.	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 7

BCMCS Schema Statistics

The BCMCS schema provides operational statistics that can be used for monitoring and troubleshooting the following products: PDSN

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 7. Bulk Statistic Variables in the BCMCS Schema

Variables	Description	Data Type
vpnname	Description: The name of the context configured on the system that is currently facilitating the BCMCS configuration. This is a key variable.	String

Variables	Description	Data Type
vpnid	Description: The identification number of the context configured on the system that is currently facilitating the BCMCS configuration. This is an internal reference number. This is a key variable.	Int32
servname	Description: The name of the BCMCS service for which the statistics are displayed. This is a key variable.	String
srsp-recv-total	Description: This proprietary counter indicates the total number of A11-BC service requests received by PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Service Request is received by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-accept-total	Description: This proprietary counter indicates the total number of A11-BC service requests accepted by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Service Request is accepted by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-denied-total	Description: This proprietary counter indicates the total number of A11-BC service requests denied by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Service Request is denied by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-reply-total	Description: This proprietary counter indicates the total number of A11-BC service responses sent by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Service Request is sent by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-discard-total	This proprietary counter indicates the total number of A11-BC service requests discarded by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Service Request is discarded by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-accept-initial	Description: This proprietary counter indicates the total number of initial A11-BC service requests received and accepted by the PDSN service acting as the BSN. Triggers: - Incremented when an initial A11-BC Service Request is received and accepted by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
srsp-recv-initial	Description: This proprietary counter indicates the total number of initial A11-BC service requests received by the PDSN service acting as the BSN. Triggers: - Incremented when an initial A11-BC Service Request is received by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-denied-initial	Description: This proprietary counter indicates the total number of initial A11-BC service requests received and rejected by the PDSN service acting as the BSN. Triggers: - Incremented when an initial A11-BC Service Request is received and rejected by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-discard-initial	Description: This proprietary counter indicates the total number of initial A11-BC service requests discarded by the PDSN service acting as the BSN. Triggers: - Incremented when an initial A11-BC Service Request is discarded by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-accept-renew	Description: This proprietary counter indicates the total number of renewal A11-BC service requests received and accepted by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC Service Request is received and accepted by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-denied-renew	Description: This proprietary counter indicates the total number of renewal A11-BC service requests received and denied by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC Service Request is received and denied by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-recv-renew	Description: This proprietary counter indicates the total number of renewal A11-BC service requests received by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC Service Request is received by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-discard-renew	Description: This proprietary counter indicates the total number of renewal A11-BC service requests received and discarded by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC Service Request is received and discarded by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
srsp-send-error	Description: This proprietary counter indicates the total number of A11-BC service responses for which errors were experienced during transmission. Triggers: - Incremented when PDSN service experienced errors while trying to send A11-BC service response. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-decode-error	Description: This proprietary counter indicates the total number of A11-BC service requests that had decode errors. Triggers: - Incremented when PDSN service experienced decode error while trying to process A11-BC service request. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-unhandled	Description: This proprietary counter indicates the total number of A11-BC service requests that had unhandled errors. Triggers: - Incremented when PDSN service experienced unhandled error while trying to process A11-BC service request. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-unspec	Description: This proprietary counter indicates the total number of A11-BC service requests that were denied for an unspecified reason. Triggers: - Incremented when PDSN service denied A11-BC service request with unspecified reason. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-auth	Description: This proprietary counter indicates the total number of A11-BC service requests that were denied due to mobile node failing authentication. Triggers: - Incremented when PDSN service denied A11-BC service request due to mobile node failing authentication. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-idmismatch	Description: This proprietary counter indicates the total number of A11-BC service requests that were denied due to identification mismatch. Triggers: - Incremented when PDSN service denied A11-BC service request due to identification mismatch. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
srsp-deny-unknownbsn	Description: This proprietary counter indicates the total number of A11-BC service requests that were denied due to unknown BSN address. Triggers: - Incremented when PDSN service denied A11-BC service request due to unknown BSN address. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-noresource-nosessmgr	Description: This proprietary counter indicates the total number of A11-BC service requests that were denied with insufficient resource due to no session manager. Triggers: - Incremented when PDSN service denied A11-BC service request with insufficient resource due to no session manager. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-noresource-nomem	Description: This proprietary counter indicates the total number of A11-BC service requests that were denied with insufficient resource due to no memory.. Triggers: - Incremented when PDSN service denied A11-BC service request with insufficient resource due to no memory. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-noresource-sessmgrretried	Description: This proprietary counter indicates the total number of A11-BC service requests denied due to insufficient resource, session managers retried reported per service. Triggers: - Incremented when PDSN service denied A11-BC service request due to Insufficient resource, session managers retried. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-noresource-inputq	Description: The total number of service requests denied due to insufficient resource, input queue exceeded reported per service. Triggers: - Incremented when PDSN service denied A11-BC service request due to Insufficient resource, input queue exceeded. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-badrequest-alrdorm	Description: This proprietary counter indicates the total number of A11-BC service requests denied due to poorly formed request, session already dormant. Triggers: - Incremented when PDSN service denied A11-BC service request due to poorly formed request, session already dormant. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
srsp-deny-badrequest-alractive	Description: This proprietary counter indicates the total number of A11-BC service requests denied due to poorly formed request, already active. Triggers: - Incremented when PDSN service denied A11-BC service request due to poorly formed request, already active. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-badrequest-other	Description: This proprietary counter indicates the total number of A11-BC service requests denied due to poorly formed request, other reason. Triggers: - Incremented when PDSN service denied A11-BC service request due to poorly formed request, other reason. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-cong-adminprohib	Description: This proprietary counter indicates the total number of A11-BC service requests denied due to administrative prohibition due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information. Triggers: - Incremented when PDSN service denied A11-BC service request due to administrative prohibition due to congestion. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
srsp-deny-cong-unknownbsn	Description: This proprietary counter indicates the total number of A11-BC service requests denied due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information. Triggers: - Incremented when PDSN service denied A11-BC service request due to congestion. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
num-sessions	Description: This proprietary gauge indicates the total number of current BCMCS Sessions. Triggers: - Incremented when a BCMCS session is established successfully. - Decrementd when a BCMCS session is disconnected. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
recv-total	Description: This proprietary counter indicates the total number of A11-BC registration requests received by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Registration Request is received by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
accept-total	Description: This proprietary counter indicates the total number of A11-BC registration requests accepted by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Registration request is accepted by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
denied-total	Description: This proprietary counter indicates the total number of A11-BC registration requests denied by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Registration request is denied by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
reply-total	Description: This proprietary counter indicates the total number of A11-BC service responses sent by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Registration request is sent by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
discard-total	Description: This proprietary counter indicates the total number of A11-BC registration requests discarded by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Registration request is discarded by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
accept-initial	Description: This proprietary counter indicates the total number of initial A11-BC registration requests received and accepted by the PDSN service acting as the BSN. Triggers: - Incremented when an initial A11-BC Registration request is received and accepted by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
recv-initial	Description: This proprietary counter indicates the total number of initial A11-BC registration requests received by the PDSN service acting as the BSN. Triggers: - Incremented when an initial A11-BC Registration request is received by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
denied-initial	Description: This proprietary counter indicates the total number of initial A11-BC registration requests received and rejected by the PDSN service acting as the BSN. Triggers: - Incremented when an initial A11-BC Registration request is received and rejected by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
discard-initial	Description: This proprietary counter indicates the total number of initial A11-BC registration requests discarded by the PDSN service acting as the BSN. Triggers: - Incremented when an initial A11-BC Registration request is discarded by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
accept-renew	Description: This proprietary counter indicates the total number of renewal A11-BC service requests received and accepted by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC Service Request is received and accepted by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
denied-renew	Description: This proprietary counter indicates the total number of renewal A11-BC registration requests received and denied by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC Registration request is received and denied by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
discard-renew	Description: This proprietary counter indicates the total number of renewal A11-BC registration requests received and discarded by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC Registration request is received and discarded by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
recv-renew	Description: This proprietary counter indicates the total number of renewal A11-BC registration requests received by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC Registration request is received by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
active-start-renew	Description: This proprietary counter indicates the total number of renewal A11-BC active start registration requests received by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC active start Registration request is received by the PDSN service Availability: per PDSN service, per PCF, per session Type: Counter	Int32
active-stop-renew	Description: This proprietary counter indicates the total number of renewal A11-BC active stop registration requests received by the PDSN service acting as the BSN. Triggers: - Incremented when an renewal A11-BC active stop Registration request is received by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
accept-dereg	Description: This proprietary counter indicates the total number of deregistration A11-BC service requests received and accepted by the PDSN service acting as the BSN.. Triggers: - Incremented when an deregistration A11-BC Service Request is received and accepted by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
denied-dereg	Description: This proprietary counter indicates the total number of A11-BC deregistration requests received and denied by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC deregistration Request is received and denied by the PDSN service Availability: per PDSN service, per PCF, per session Type: Counter	Int32
discard-dereg	Description: This proprietary counter indicates the total number of A11-BC deregistration requests received and discarded by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC deregistration request is received and discarded by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
recv-dereg	Description: This proprietary counter indicates the total number of A11-BC deregistration requests received by the PDSN service acting as the BSN. Triggers: - Incremented when an initial A11-BC deregistration request is received by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
active-stop-dereg	Description: This proprietary counter indicates the total number of ACTIVE STOP A11-BC deregistration requests received by the PDSN service acting as the BSN. Triggers: - Incremented when an initial ACTIVE STOP A11-BC deregistration request is received by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
send-error	Description: This proprietary counter indicates the total number of A11-BC deregistration replies for which errors were experienced during transmission. Triggers: - Incremented when A11-BC deregistration reply experiences error during transmission. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
hash-error	Description: This proprietary counter indicates the total number of A11-BC deregistration requests that had internal hash lookup errors. Triggers: - Incremented when an A11-BC deregistration request processing had internal hash lookup error. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
decode-error	Description: This proprietary counter indicates the total number of A11-BC registration requests that had decode errors. Triggers: - Incremented when PDSN service experienced decode error while trying to process A11-BC registration request. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
unhandled	Description: This proprietary counter indicates the total number of A11-BC registration requests that had unhandled errors. Triggers: - Incremented when PDSN service experienced unhandled error while trying to process A11-BC registration request. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
seqerror	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied due to unacceptable sequence number. Triggers: - Incremented when PDSN service denied A11-BC service request due to unacceptable sequence number. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-unspec	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 80H (Registration Denied - reason unspecified). Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 80H (Registration Denied - reason unspecified). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-adminprohib	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 81H (Registration Denied - administratively prohibited). Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 81H (Registration Denied - administratively prohibited). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-noresource	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 82H (Registration Denied - insufficient resources). Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 82H (Registration Denied - insufficient resources). Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
deny-auth	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 83H (Registration Denied - mobile node failed authentication). Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 83H (Registration Denied - mobile node failed authentication). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-idmismatch	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 85H (Registration Denied - identification mismatch). Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 85H (Registration Denied - identification mismatch). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-badrequest	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 86H (Registration Denied - poorly formed request). Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 86H (Registration Denied - poorly formed request). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-unknownbsn	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied unknown BSN address. Triggers: - Incremented when PDSN service denied A11-BC registration request due to unknown BSN address. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-revtununavail	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 89H (Registration Denied - requested reverse tunnel unavailable). Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 89H (Registration Denied - requested reverse tunnel unavailable). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-revtunreq	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 8AH (Registration Denied - reverse tunnel is mandatory and "T"-bit not set). Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 8AH (Registration Denied - reverse tunnel is mandatory and "T"-bit not set). Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
deny-unrecogvend	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 8DH (Registration Denied - unsupported vendor ID or unable to interpret data in the CVSE). Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 8DH (Registration Denied - unsupported vendor ID or unable to interpret data in the CVSE). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-sessclosed	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied using reply code of 0x8E for absent RP sessions. Triggers: - Incremented when PDSN service denied A11-BC registration request using reply code of 0x8E for absent RP sessions. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-bsninfo	Description: This proprietary counter indicates the total number of A11-BC registration requests that were denied because BSN information was unavailable. Triggers: - Incremented when PDSN service denied A11-BC registration due to non availability of BSN Information. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-noresource-nosessmgr	Description: This proprietary counter indicates the total number of A11-BC registration requests denied due to Insufficient resource, no session manager. Triggers: - Incremented when PDSN service denied A11-BC registration due to Insufficient resource, no session manager. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-noresource-nomem	Description: This proprietary counter indicates the total number of A11-BC registration requests denied due to Insufficient resource, no memory. Triggers: - Incremented when PDSN service denied A11-BC registration due to Insufficient resource, no memory. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-noresource-sessmgrretried	Description: This proprietary counter indicates the total number of A11-BC registration requests denied due to Insufficient resource, session managers retried. Triggers: - Incremented when PDSN service denied A11-BC registration due to Insufficient resource, session managers retried. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
deny-noresource-inputq	Description: This proprietary counter indicates the total number of A11-BC registration requests denied due to Insufficient resource, session managers retried. Triggers: - Incremented when PDSN service denied A11-BC registration due to Insufficient resource, input queue exceeded. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-badrequest-alrdorm	Description: This proprietary counter indicates the total number of A11-BC registration requests denied due to to poorly formed request, session already dormant. Triggers: - Incremented when PDSN service denied A11-BC registration due to to poorly formed request, session already dormant. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-badrequest-alractive	Description: This proprietary counter indicates the total number of A11-BC registration requests denied due to poorly formed request, already active. Triggers: - Incremented when PDSN service denied A11-BC registration request due to poorly formed request, already active. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-badrequest-other	Description: This proprietary counter indicates the total number of A11-BC registration requests denied due to poorly formed request, other reason. Triggers: - Incremented when PDSN service denied A11-BC registration request due to poorly formed request, other reason. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-cong-drop	Description: This proprietary counter indicates the total number of A11-BC service requests denied due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information. Triggers: - Incremented when PDSN service denied A11-BC service request due to congestion. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
deny-cong-adminprohib	Description: This proprietary counter indicates the total number of A11-BC service requests denied due to administrative prohibition due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information. Triggers: - Incremented when PDSN service denied A11-BC service request due to administrative prohibition due to congestion. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
deny-cong-unknownbsn	Description: This proprietary counter indicates the total number of A11-BC service requests denied due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information. Triggers: - Incremented when PDSN service denied A11-BC service request due to congestion. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-total	Description: This proprietary counter indicates the total number of A11-BC registration updates that were transmitted by the PDSN service acting as the BSN. Triggers: - Incremented when an A11-BC Registration update is transmitted by the PDSN service Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-accept	Description: This proprietary counter indicates the total number of A11-BC registration updates that were that were accepted by the PCF. Triggers: - Incremented when an A11-BC Registration update Ack is received from PCF. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-denied	Description: This proprietary counter indicates the total number of A11-BC registration updates that were denied by PCF. Triggers: - Incremented when an A11-BC Registration update NAK is received from PCF. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-unack	Description: This proprietary counter indicates the total number of A11-BC registration updates for which no acknowledgement was received from PCF. Triggers: - Incremented when an A11-BC Registration Ack is not received before the configured timeout. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-trans	Description: This proprietary counter indicates the total number of initial A11-BC registration updates for which no acknowledgement was received from PCF. Triggers: - Incremented when an initial A11-BC Registration request is transmitted by the PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-ttlnoetrans	Description: This proprietary counter indicates the total number of A11-BC registration updates that were not re-transmitted due to TTL expiration. Triggers: - This counter is derived as total A11-BC Registration updates transmitted less total A11-BC Registration requests retransmitted. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
upd-retrans	Description: This proprietary counter indicates the total number of A11-BC registration updates that were re-transmitted. Triggers: - This counter is incremented when PDSN service retransmits A11-BC Registration update. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-received	Description: This proprietary counter indicates the total number of A11-BC registration update Acks that were received. Triggers: - This counter is incremented when PDSN service receives A11-BC Registration Ack from PCF. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-ack-received	Description: This proprietary counter indicates the total number of A11-BC registration update Acks that were received. Triggers: - This counter is incremented when PDSN service receives A11-BC Registration Ack from PCF. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-discard	Description: This proprietary counter indicates the total number A11-BC registration update Acks that were received and discarded by the PDSN service acting as the BSN. Triggers: - This counter is incremented when PDSN service receives A11-BC Registration Ack from PCF is discarded in PDSN service. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-senderror	Description: This proprietary counter indicates the total number of A11-BC registration update for which errors were experienced during transmission. Triggers: - This counter is incremented when BSN experiences error during transmission of A11-BC Registration update. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-lifetime	Description: This proprietary counter indicates the total number of A11-BC registration updates sent due to Lifetimer Expiry. Triggers: - This counter is incremented when BSN sends A11-BC Registration update due to lifetimer expiry. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-uplyrinit	Description: This proprietary counter indicates the total number of A11-BC registration updates initiated by upper processing layers. Triggers: - This counter is incremented when BSN sends A11-BC Registration update due to a trigger from upper layer. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
upd-other	Description: This proprietary counter indicates the total number of A11-BC registration updates due to reasons other than those listed here. Triggers: - This counter is incremented when BSN sends A11-BC Registration update due to reasons other than those listed here. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upd-smgrexit	Description: This proprietary counter indicates the total number of A11-BC registration updates due to sessmgr exit. Triggers: - This counter is incremented when BSN sends A11-BC Registration update due to session manager exit. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upddeny-unspec	Description: This proprietary counter indicates the total number of A11-BC registration Acknowledge received from PCF with reply code of 80H (Registration Denied - reason unspecified). Triggers: - This counter is incremented when PDSN service receives A11-BC Registration Acknowledge with reply code of 80H (Registration Denied - reason unspecified). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upddeny-adminprohib	Description: This proprietary counter indicates the total number of A11-BC registration Acknowledge received from PCF with reply code of 81H (Registration Denied - administratively prohibited). Triggers: - This counter is incremented when PDSN service receives A11-BC Registration Acknowledge with reply code of 81H (Registration Denied - administratively prohibited). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upddeny-auth	Description: This proprietary counter indicates the total number of A11-BC registration Acknowledge received from PCF with reply code of 83H (Registration Denied - mobile node failed authentication). Triggers: - This counter is incremented when PDSN service receives A11-BC Registration Acknowledge with reply code of 83H (Registration Denied - mobile node failed authentication). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
upddeny-idmismatch	Description: This proprietary counter indicates the total number of A11-BC registration Acknowledge received from PCF with reply code of 85H (Registration Denied - identification mismatch). Triggers: - This counter is incremented when PDSN service receives A11-BC Registration Acknowledge with reply code of 85H (Registration Denied - identification mismatch). Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
upddeny-badrequest	Description: This proprietary counter indicates the total number of A11-BC registration Acknowledge received from PCF with reply code of 86H (Registration Denied - poorly formed request). Triggers: - This counter is incremented when PDSN service receives A11-BC Registration Acknowledge with reply code of 86H (Registration Denied - poorly formed request). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
sec-violations	Description: This proprietary counter indicates the total number of security violations happened in A11 signaling. Triggers: - This counter is incremented when security violation occurs in BC A11 signaling due to bad authenticator, bad spi etc ... Availability: per PDSN service, per PCF, per session Type: Counter	Int32
sec-badauth	Description: This proprietary counter indicates the total number of security violations happened in A11 signaling due to a mis-computed authenticator field. Triggers: - This counter is incremented when security violation occurs in BC A11 signaling due to bad authenticator field. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
sec-badid	Description: This proprietary counter indicates the total number of security violations happened in A11 signaling due to bad identification field Triggers: - This counter is incremented when security violation occurs in BC A11 signaling due to bad identification field. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
sec-badspi	Description: This proprietary counter indicates the total number of security violations happened in A11 signaling due to bad to the receipt of a Security Parameter Index (SPI) that was in the reserved range (0 through 255). Triggers: - This counter is incremented when security violation occurs in BC A11 signaling due to the receipt of a Security Parameter Index (SPI) that was in the reserved range (0 through 255). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
sec-mnhaauth	Description: This proprietary counter indicates the total number of security violations happened in A11 signaling due to missing mobile node-home agent authentication extensions. Triggers: - This counter is incremented when security violation occurs in BC A11 signaling due to missing mobile node-home agent authentication extensions. Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
sec-regupdate	Description: This proprietary counter indicates the total number of security violations happened in A11 signaling due to missing registration update authentication extensions. Triggers: - This counter is incremented when security violation occurs in BC A11 signaling due to missing registration update authentication extensions. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
disc-absent	Description: This proprietary counter indicates the total number of A11-BC registration acknowledgements that were received and discarded due to the session having been already ended because the acknowledgement was late. Triggers: - This counter is incremented when A11-BC registration acknowledgement is received and discarded due to session being already disconnected. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
disc-nomem	Description: This proprietary counter indicates the total number of A11-BC registration acknowledgements that were received and discarded due to insufficient memory. Triggers: - This counter is incremented when A11-BC registration acknowledgement is received discarded due to insufficient memory. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
disc-malform	Description: This proprietary counter indicates the total number of A11-BC registration acknowledgements that were received and discarded due to being poorly formed. Triggers: - This counter is incremented when A11-BC registration acknowledgement is received discarded due to being poorly formed. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
disc-authfail	Description: This proprietary counter indicates the total number of A11-BC registration acknowledgements that were received and discarded due to the mobile node failing authentication. Triggers: - This counter is incremented when A11-BC registration acknowledgement is received discarded due to the mobile node failing authentication. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
disc-bounce	Description: This proprietary counter indicates the total number A11-BC registration acknowledgements that were received and discarded due to internal communication messages between an A11 Manager task and a Session Manager bouncing (not successfully sent). Triggers: - This counter is incremented when message bounces occurs between A11 Manager and Session Manager while trying to process an A11 BC Registration Acknowledge Availability: per PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
disc-inputq	Description: This proprietary counter indicates the total number A11-BC registration acknowledges that were received and discarded due to the queue in which incoming calls are kept prior to being processed exceeded its capacity. Triggers: - This counter is incremented when A11 BC registration acknowledge is discarded due to the queue in which incoming calls are kept prior to being processed exceeded its capacity. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
disc-mismatchid	Description: This proprietary counter indicates the total number A11-BC registration acknowledges that were received and discarded due to due to reply code 85H (Registration Denied - identification mismatch). Triggers: - This counter is incremented when A11 BC registration acknowledge is discarded due to reply code 85H (Registration Denied - identification mismatch). Availability: per PDSN service, per PCF, per session Type: Counter	Int32
disc-invpklen	Description: This proprietary counter indicates the total number A11-BC registration acknowledges that were received and discarded due to due to to having an invalid packet length. Triggers: - This counter is incremented when A11 BC registration acknowledge is discarded due to to it having an invalid packet length. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
disc-misc	Description: This proprietary counter indicates the total number A11-BC registration acknowledges that were received and discarded due any other reasons. Triggers: - This counter is incremented when A11 BC registration acknowledge is discarded due to to any other reasons. Availability: per PDSN service, per PCF, per session Type: Counter	Int32
 Important: See Bulk Statistics Overview for statistics that are common to all schema.		

Chapter 8

Card Schema Statistics

The Card schema provides operational statistics that can be used for monitoring and troubleshooting the following products: All

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 8. Bulk Statistic Variables in the Card-level Schema

Variables	Description	Data Type
card	Description: Chassis slot number between 1 and 16. This is a key variable. (for ASR 5000 platforms) Type: Information	Int32

Variables	Description	Data Type
cpubusy	Description: Total CPU busy (across all CPUs, as percentage) Type: Gauge	Float
cpuidle	Description: Total CPU idle (across all CPUs, as percentage) Type: Gauge	Float
numproc	Description: Total number of processes Type: Gauge	Int32
memused	Description: Total amount of memory used (across all processors) Type: Gauge	Int32
memtotal	Description: Total amount of memory available (across all processors) Type: Gauge	Int32
numcpu	Description: The total number of CPUs Type: Gauge	Int32
cpu0-cpubusy	Description: The percentage of time that CPU 0 was busy Type: Gauge	Float
cpu0-cpuidle	Description: The percentage of time that CPU 0 was idle Type: Gauge	Float
cpu0-numproc	Description: The number of processes running on CPU 0 Type: Gauge	Int32
cpu0-memused	Description: The amount of memory used on CPU 0 Type: Gauge	Int32
cpu0-memtotal	Description: The total amount of memory available for CPU 0 Type: Gauge	Int32
cpu0-name	Description: A string designating the name of CPU 0. Type: Information	String
cpu0-cpuused-user	Description: The percentage of resources on CPU 0 used in user session processing. Type: Gauge	Float
cpu0-cpuused-sys	Description: The percentage of resources on CPU 0 used by system tasks. Type: Gauge	Float
cpu0-cpuused-io	Description: The percentage of resources on CPU 0 used by input/output functions. Type: Gauge	Float
cpu0-cpuused-irq	Description: The percentage of resources on CPU 0 used by interrupt requests. Type: Gauge	Float
cpu0-cpuused-idle	Description: The percentage of resources on CPU 0 that are idle. Type: Gauge	Float
cpu1-cpubusy	Description: The percentage of time that CPU 1 was busy Type: Gauge	Float
cpu1-cpuidle	Description: The percentage of time that CPU 1 was idle Type: Gauge	Float

Variables	Description	Data Type
cpu1-numproc	Description: The number of processes running on CPU 1 Type: Gauge	Int32
cpu1-memused	Description: The amount of memory used on CPU 1 Type: Gauge	Int32
cpu1-memtotal	Description: The total amount of memory available for CPU 2 Type: Gauge	Int32
cpu1-name	Description: A string designating the name of CPU 1. Type: Information	String
cpu1-cpuused-user	Description: The percentage of resources on CPU 1 used in user session processing. Type: Gauge	Float
cpu1-cpuused-sys	Description: The percentage of resources on CPU 1 used by system tasks. Type: Gauge	Float
cpu1-cpuused-io	Description: The percentage of resources on CPU 1 used by input/output functions. Type: Gauge	Float
cpu1-cpuused-irq	Description: The percentage of resources on CPU 1 used by interrupt requests. Type: Gauge	Float
cpu1-cpuused-idle	Description: The percentage of resources on CPU 1 that are idle. Type: Gauge	Float
cpu2-cpubusy	Description: The percentage of time that CPU 2 was busy Type: Gauge	Float
cpu2-cpuidle	Description: The percentage of time that CPU 2 was idle Type: Gauge	Float
cpu2-numproc	Description: The number of processes running on CPU 2 Type: Gauge	Int32
cpu2-memused	Description: The amount of memory used on CPU 2 Type: Gauge	Int32
cpu2-memtotal	Description: The total amount of memory available for CPU 2 Type: Gauge	Int32
cpu2-name	Description: A string designating the name of CPU 2. Type: Information	String
cpu2-cpuused-user	Description: The percentage of resources on CPU 2 used in user session processing. Type: Gauge	Float
cpu2-cpuused-sys	Description: The percentage of resources on CPU 2 used by system tasks. Type: Gauge	Float
cpu2-cpuused-io	Description: The percentage of resources on CPU 2 used by input/output functions. Type: Gauge	Float
cpu2-cpuused-irq	Description: The percentage of resources on CPU 2 used by interrupt requests. Type: Gauge	Float

Variables	Description	Data Type
cpu2-cpuused-idle	Description: The percentage of resources on CPU 2 that are idle. Type: Gauge	Float
cpu3-cpubusy	Description: The percentage of time that CPU 3 was busy Type: Gauge	Float
cpu3-cpuidle	Description: The percentage of time that CPU 3 was idle Type: Gauge	Float
cpu3-numproc	Description: The number of processes running on CPU 3 Type: Gauge	Int32
cpu3-memused	Description: The amount of memory used on CPU 3 Type: Gauge	Int32
cpu3-memtotal	Description: The total amount of memory available for CPU 3 Type: Gauge	Int32
cpu3-name	Description: A string designating the name of CPU 3. Type: Information	String
cpu3-cpuused-user	Description: The percentage of resources on CPU 3 used in user session processing. Type: Gauge	Float
cpu3-cpuused-sys	Description: The percentage of resources on CPU 3 used by system tasks. Type: Gauge	Float
cpu3-cpuused-io	Description: The percentage of resources on CPU 3 used by input/output functions. Type: Gauge	Float
cpu3-cpuused-irq	Description: The percentage of resources on CPU 3 used by interrupt requests. Type: Gauge	Float
cpu3-cpuused-idle	Description: The percentage of resources on CPU 3 that are idle. Type: Gauge	Float
15avg-cpubusy	Average CPU usage across all CPUs on this card over a 15-minute period Type: Gauge	Float
15peak-cpubusy	Description: Peak CPU usage across all CPUs on this card. This is the peak 1-minute average over the last 15 minutes. Type: Gauge	Float
5avg-cpubusy	Description: Average CPU usage across all CPUs on this card over a 5-minute period Type: Gauge	Float
5peak-cpubusy	Description: Peak CPU usage across all CPUs on this card. This is the peak 1-minute average over the last 5 minutes. Type: Gauge	Float
1avg-cpubusy	Description: Average CPU usage across all CPUs on this card over a 1-minute period Type: Gauge	Float
15avg-memused	Description: Average memory usage across all CPUs on this card over a 15-minute period Type: Gauge	Float

Variables	Description	Data Type
15peak-memused	Description: Peak memory usage across all CPUs on this card. This is the peak 1 -minute average over the last 15 minutes. Type: Gauge	Float
5avg-memused	Description: Average memory usage across all CPUs on this card over a 5 -minute period Type: Gauge	Float
5peak-memused	Description: Peak memory usage across all CPUs on this card. This is the peak 1 -minute average over the last 5 -minutes. Type: Gauge	Float
1avg-memused	Description: Average memory usage across all CPUs on this card over a 1 -minute period. Type: Gauge	Float
cpu0-15avg-cpubusy	Description: Average CPU usage for CPU 0 on this card over a 15 -minute period Type: Gauge	Float
cpu0-15peak-cpubusy	Description: Peak CPU usage for CPU 0. This is the peak 1 -minute average over the last 15 minutes. Type: Gauge	Float
cpu0-5avg-cpubusy	Description: Average CPU usage for CPU 0 on this card over a 5 -minute period Type: Gauge	Float
cpu0-5peak-cpubusy	Description: Peak CPU usage for CPU 0. This is the peak 1 -minute average over the last 5 minutes. Type: Gauge	Float
cpu0-1avg-cpubusy	Description: Average CPU usage for CPU 0 on this card over a 1 -minute period Type: Gauge	Float
cpu0-15avg-memused	Description: Average memory usage for CPU 0 over a 15 -minute period Type: Gauge	Float
cpu0-15peak-memused	Description: Peak memory usage for CPU 0. This is the peak 1 -minute average over the last 15 minutes. Type: Gauge	Float
cpu0-5avg-memused	Description: Average memory usage for CPU 0 over a 5 -minute period Type: Gauge	Float
cpu0-5peak-memused	Description: Peak memory usage for CPU 0. This is the peak 1 -minute average over the last 15 minutes. Type: Gauge	Float
cpu0-1avg-memused	Description: Average memory usage for CPU 0 over a 1 -minute period Type: Gauge	Float
cpu1-15avg-cpubusy	Description: Average CPU usage for CPU 1 on this card over a 15 -minute period Type: Gauge	Float
cpu1-15peak-cpubusy	Description: Peak CPU usage for CPU 1. This is the peak 1 -minute average over the last 15 minutes. Type: Gauge	Float

Variables	Description	Data Type
cpu1-5avg-cpubusy	Description: Average CPU usage for CPU 1 on this card over a 5-minute period Type: Gauge	Float
cpu1-5peak-cpubusy	Description: Peak CPU usage for CPU 1. This is the peak 1-minute average over the last 5 minutes. Type: Gauge	Float
cpu1-1avg-cpubusy	Description: Average CPU usage for CPU 1 on this card over a 1-minute period Type: Gauge	Float
cpu1-15avg-memused	Description: Average memory usage for CPU 1 over a 15-minute period Type: Gauge	Float
cpu1-15peak-memused	Description: Peak memory usage for CPU 1. This is the peak 1-minute average over the last 15 minutes. Type: Gauge	Float
cpu1-5avg-memused	Description: Average memory usage for CPU 1 over a 5-minute period Type: Gauge	Float
cpu1-5peak-memused	Description: Peak memory usage for CPU 1. This is the peak 1-minute average over the last 5 minutes. Type: Gauge	Float
cpu1-1avg-memused	Average memory usage for CPU 1 over a 1-minute period Type: Gauge	Float
cpu2-15avg-cpubusy	Description: Average CPU usage for CPU 2 on this card over a 15-minute period Type: Gauge	Float
cpu2-15peak-cpubusy	Description: Peak CPU usage for CPU 2. This is the peak 1-minute average over the last 15 minutes. Type: Gauge	Float
cpu2-5avg-cpubusy	Description: Average CPU usage for CPU 2 on this card over a 5-minute period Type: Gauge	Float
cpu2-5peak-cpubusy	Description: Peak CPU usage for CPU 2. This is the peak 1-minute average over the last 5 minutes. Type: Gauge	Float
cpu2-1avg-cpubusy	Description: Average CPU usage for CPU 2 on this card over a 1-minute period Type: Gauge	Float
cpu2-15avg-memused	Description: Average memory usage for CPU 2 over a 15-minute period Type: Gauge	Float
cpu2-15peak-memused	Description: Peak memory usage for CPU 2. This is the peak 1-minute average over the last 15 minutes. Type: Gauge	Float
cpu2-5avg-memused	Description: Average memory usage for CPU 2 over a 5-minute period Type: Gauge	Float

Variables	Description	Data Type
cpu2-5peak-memused	Description: Peak memory usage for CPU 2. This is the peak 1-minute average over the last 5 minutes. Type: Gauge	Float
cpu2-1avg-memused	Description: Average memory usage for CPU 2 over a 1-minute period Type: Gauge	Float
cpu3-15avg-cpubusy	Description: Average CPU usage for CPU 3 on this card over a 15-minute period Type: Gauge	Float
cpu3-15peak-cpubusy	Description: Peak CPU usage for CPU 3. This is the peak 1-minute average over the last 15 minutes. Type: Gauge	Float
cpu3-5avg-cpubusy	Description: Average CPU usage for CPU 3 on this card over a 5-minute period Type: Gauge	Float
cpu3-5peak-cpubusy	Description: Peak CPU usage for CPU 3. This is the peak 1-minute average over the last 5 minutes. Type: Gauge	Float
cpu3-1avg-cpubusy	Description: Average CPU usage for CPU 3 on this card over a 1-minute period Type: Gauge	Float
cpu3-15avg-memused	Description: Average memory usage for CPU 3 over a 5 minute period Type: Gauge	Float
cpu3-15peak-memused	Description: Peak memory usage for CPU 3. This is the peak 1-minute average over the last 15 minutes. Type: Gauge	Float
cpu3-5avg-memused	Description: Average memory usage for CPU 3 over a 15-minute period Type: Gauge	Float
cpu3-5peak-memused	Description: Peak memory usage for CPU 3. This is the peak 1-minute average over the last 5 minutes. Type: Gauge	Float
cpu3-1avg-memused	Description: Average memory usage for CPU 3 over a 1-minute period Type: Gauge	Float
task-sessmgr-num	Description: Total number of active sessmgr tasks across all CPUs on this card. Type: Gauge	Int32
task-sessmgr-avgcpu	Description: Average percentage of CPU utilization of all active sessmgr tasks across all CPUs on this card. Type: Gauge	Float
task-sessmgr-avgmem	Description: Average percentage of allocated memory utilization of all active sessmgr tasks across all CPUs on this card. Type: Gauge	Float
task-sessmgr-maxcpu	Description: Maximum percentage of CPU utilization of the busiest sessmgr task across all CPUs on this card. Type: Gauge	Float

■ Common Syntax Options

Variables	Description	Data Type
task-sessmgr-maxmem	Description: Maximum percentage of allocated memory utilization of the peak sessmgr task across all CPUs on this card. Type: Gauge	Float
task-a1l1mgr-num	Description: Total number of active a1l1mgr tasks across all CPUs on this card. Type: Gauge	Int32
task-a1l1mgr-maxcpu	Description: Maximum percentage of CPU utilization of the busiest a1l1mgr task across all CPUs on this card. Type: Gauge	Float
task-a1l1mgr-maxmem	Description: Maximum percentage of allocated memory utilization of the peak a1l1mgr task across all CPUs on this card. Type: Gauge	Float
task-l2tpmgr-num	Description: Total number of active l2tpmgr tasks across all CPUs on this card. Type: Gauge	Int32
task-l2tpmgr-maxcpu	Description: Maximum percentage of CPU utilization of the busiest l2tpmgr task across all CPUs on this card. Type: Gauge	Float
task-l2tpmgr-maxmem	Description: Maximum percentage of allocated memory utilization of the peak l2tpmgr task across all CPUs on this card. Type: Gauge	Float
task-famgr-num	Description: Total number of active famgr tasks across all CPUs on this card. Type: Gauge	Int32
task-famgr-maxcpu	Description: Maximum percentage of CPU utilization of the busiest famgr task across all CPUs on this card. Type: Gauge	Float
task-famgr-maxmem	Description: Maximum percentage of allocated memory utilization of the peak famgr task across all CPUs on this card. Type: Gauge	Float
task-hamgr-num	Description: Total number of active hamgr tasks across all CPUs on this card. Type: Gauge	Int32
task-hamgr-maxcpu	Description: Maximum percentage of CPU utilization of the busiest hamgr task across all CPUs on this card. Type: Gauge	Float
task-hamgr-maxmem	Description: Maximum percentage of allocated memory utilization of the peak hamgr task across all CPUs on this card. Type: Gauge	Float
task-acsmgr-num	Description: Total number of active acsmgr tasks across all CPUs on this card. Type: Gauge	Int32
task-acsmgr-avgcpu	Description: Average percentage of CPU utilization of all active acsmgr tasks across all CPUs on this card. Type: Gauge	Float

Variables	Description	Data Type
task-acsmgr-avgmem	Description: Average percentage of allocated memory utilization of all active acsmgr tasks across all CPUs on this card. Type: Gauge	Float
task-acsmgr-maxcpu	Description: Maximum percentage of CPU utilization of the busiest acsmgr task across all CPUs on this card. Type: Gauge	Float
task-acsmgr-maxmem	Description: Maximum percentage of allocated memory utilization of the peak acsmgr task across all CPUs on this card. Type: Gauge	Float
task-vpnmgr-num	Description: Total number of active vpnmgr tasks across all CPUs on this card. Type: Gauge	Int32
task-vpnmgr-maxcpu	Description: Maximum percentage of CPU utilization of the busiest vpnmgr task across all CPUs on this card. Type: Gauge	Float
task-vpnmgr-maxmem	Description: Maximum percentage of allocated memory utilization of the peak vpnmgr task across all CPUs on this card. Type: Gauge	Float
npuutil-now	Description: NPU utilization at this moment. Type: Gauge	Int32
npuutil-5minave	Description: Average NPU utilization over a 5-minute period. Type: Gauge	Int32
npuutil-15minave	Description: Average NPU utilization over a 15-minute period. Type: Gauge	Int32
npuutil-rxpkts-5secave	Description: Average NPU utilization while receiving packets over a 5-second period. Type: Gauge	Float
npuutil-rxbytes-5secave	Description: Average NPU utilization while receiving bytes over a 5-second period. Type: Gauge	Float
npuutil-txpkts-5secave	Description: Average NPU utilization while transmitting packets over a 5-second period. Type: Gauge	Float
npuutil-txbytes-5secave	Description: Average NPU utilization while transmitting bytes over a 5-second period. Type: Gauge	Float
npuutil-rxpkts-5minave	Description: Average NPU utilization while receiving packets over a 5-minute period. Type: Gauge	Float
npuutil-rxbytes-5minave	Description: Average NPU utilization while receiving bytes over a 5-minute period. Type: Gauge	Float
npuutil-txpkts-5minave	Description: Average NPU utilization while transmitting packets over a 5-minute period. Type: Gauge	Float
npuutil-txbytes-5minave	Description: Average NPU utilization while transmitting bytes over a 5-minute period. Type: Gauge	Float

Variables	Description	Data Type
npuutil-rxpkts-15minave	Description: Average NPU utilization while receiving packets over a 15-minute period. Type: Gauge	Float
npuutil-rxbytes-15minave	Description: Average NPU utilization while receiving bytes over a 15-minute period Type: Gauge	Float
npuutil-txpkts-15minave	Description: Average NPU utilization while transmitting packets over a 15-minute period. Type: Gauge	Float
npuutil-txbytes-15minave	Description: Average NPU utilization while transmitting bytes over a 15-minute period. Type: Gauge	Float
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 9

Closed R-P Schema Statistics

The Closed R-P schema provides operational statistics that can be used for monitoring and troubleshooting the following products: PDSN

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 9. Bulk Statistic Variables in the Closed R-P Service Schema

Variables	Description	Data Type
vpnname	Description: The name of the context configured on the system that is currently facilitating the Closed R-P PDSN service. This is a key variable.	String

Variables	Description	Data Type
vpnid	Description: The identification number of the context configured on the system that is currently facilitating the Closed R-P PDSN service. This is an internal reference number. This is a key variable.	Int32
servname	Description: Displays the name of the Closed R-P PDSN service for which the statistics are displayed. This is a key variable.	String
tun-conn-attempt	Description: This proprietary counter indicates the total number of tunnel connection attempts. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-conn-success	Description: This proprietary counter indicates the total number of successful tunnel connections Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-conn-fail	Description: This proprietary counter indicates the total number of failed tunnel connections. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-conn-curactive	Description: This proprietary counter indicates the total number of currently active tunnel connections. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-attempts	Description: This proprietary counter indicates the total number of session connection attempts. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-successful	Description: This proprietary counter indicates the total number of successful session connections. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-failed	Description: This proprietary counter indicates the total number of failed session connections. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-curactive	Description: This proprietary counter indicates the total number of currently active session connections. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	int2
sess-intrapdsnho-attempt	Description: This proprietary counter indicates the total number of Intra-PDSN Hand-Offs connection attempts Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-intrapdsnho-success	Description: This proprietary counter indicates the total number of successful Intra-PDSN Hand-Offs connections. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
sess-intrapdsnho-failed	Description: This proprietary counter indicates the total number of failed Intra-PDSN Hand-Offs connections. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-interpdsnho-attempt	Description: This proprietary counter indicates the total number of Inter-PDSN Hand-Offs connection attempts. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-malformed	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to malformed packets. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-ctrlfield	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to control field errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-pktlen	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to packet length errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-avplen	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to AVP length errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-protover	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to protocol version errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-md5	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to MD5 errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-invattr	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to invalid attribute errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-unkattr	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to unknown attribute errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-invsessid	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to invalid session ID errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
recv-err-invstate	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to invalid state errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-unkmsg	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to unknown message errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-unmatchpktlen	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to unmatched packet length errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
recv-err-invtunid	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to invalid tunnel length errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-genclear	Description: This proprietary counter indicates the total number of tunnels cleared normally. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-ctrlconnexists	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to a pre-existing control connection. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-unauth	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to unauthorized errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-badproto	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to bad protocol errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-reqshutdown	Description: This proprietary counter indicates the total number of tunnel disconnects experienced due to requester shutdown. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-statemacherr	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to state machine errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-badlen	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to wrong length errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
tun-oor	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to out-of-range errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-noresource	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to insufficient resources. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-vendspec	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to vendor-specific errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-tryanotherlms	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced resulting in “Try Another LNS” message generation. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-unkavp	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to unknown AVP with M-bit errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-ipsecdisc	Description: This proprietary counter indicates the total number of tunnel disconnects experienced due to IPSEC. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-ipsecfail	Description: This proprietary counter indicates the total number of tunnel failures experienced due to IPSEC. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-license	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to license exceeded errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-newcallpoldisc	Description: This proprietary counter indicates the total number of tunnel disconnects experienced due to new call policies. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-maxretry	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to the maximum number of retries being exceeded. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
tun-syslimit	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to reaching the system tunnel limit. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
tun-miscerr	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to miscellaneous errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-nogeneral	Description: This proprietary counter indicates the total number of sessions for which there were no general errors experienced. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-admin	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to administrative reasons. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-lossofcarr	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to loss of carrier. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-remoteadmin	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to remote administrative reasons. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-nofactemp	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to temporary no facility available errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-nofacperm	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to permanent no facility available errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-invdest	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to invalid destination errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-nocarrier	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due no carrier being detected. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-busysig	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to receipt of a busy signal. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-nodialtime	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to receipt of no dial tone. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
sess-lactimeout	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to LAC timeout. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-noframing	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to no appropriate framing. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-noctrlconn	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to no control connection existing. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-badlen	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to wrong length errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-oor	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to out-of-range errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-noresource	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to insufficient resources. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-invsessid	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to an invalid session ID. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-vendspec	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to vendor specific errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-tryanotherlms	Description: This proprietary counter indicates the total number of session disconnects/failures experienced resulting in “Try Another LNS” message generation. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-unkavp	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to unknown AVP with M-bit errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-maxtunnel	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to reaching the maximum tunnel limit. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
sess-ipsecfail	Description: This proprietary counter indicates the total number of session failures experienced due to IPSEC. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-ipsecdisc	Description: This proprietary counter indicates the total number of session disconnects experienced due to IPSEC. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-newcallpoldisc	Description: This proprietary counter indicates the total number of session disconnects experienced due to new call policies. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-license	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to license exceeded errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-servmismatch	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to service mismatch errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-miscerr	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to miscellaneous errors. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-hocomplete	Description: This proprietary counter indicates the total number of session disconnects experienced due to handoff completions. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-invho	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to invalid handoffs. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
sess-duplsess	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to duplicate sessions. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
ttlprepaid	Description: This proprietary counter indicates the total number of Prepaid calls facilitated by the service. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
curprepaid	Description: This proprietary counter indicates the total number of Prepaid calls currently being facilitated by the service. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
ttlonlineauthsucc	Description: This proprietary counter indicates the total number of successful Online Authentications for the service. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
ttlonlineauthfail	Description: This proprietary counter indicates the total number of successful Online Authentications for the service. Availability: per Closed-RP PDSN service, per PCF, per session Type: Counter	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 10

Context Schema Statistics

The Context schema provides operational statistics that can be used for monitoring and troubleshooting the following products: All

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 10. Bulk Statistic Variables in the Context Schema

Variables	Description	Data Type
vpnname	Description: Name of the VPN context. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	Description: Identifier for VPN context. This is a key variable. Type: Information	Int32
sfw-total-rxpackets	Description: Total number of packets received by the Stateful Firewall in-line service. Triggers: Increments when a packet is received by the Stateful Firewall in-line service. Availability: Per Active Charging Service Type: Counter	Int64
sfw-total-rxbytes	Description: Total number of bytes received by the Stateful Firewall in-line service. Triggers: Increments when a packet having layload is received by the Stateful Firewall in-line service. Availability: Per Active Charging Service Type: Counter	Int64
sfw-total-txpackets	Description: Total number of packets transmitted by the Stateful Firewall in-line service. Triggers: Increments when a packet is sent by the Stateful Firewall in-line service. Availability: Per Active Charging Service Type: Counter	Int64
sfw-total-txbytes	Description: Total number of bytes transmitted by the Stateful Firewall in-line service. Triggers: Increments when a packet having layload is forwarded by the Stateful Firewall in-line service. Availability: Per Active Charging Service Type: Counter	Int64
sfw-total-injectedpkts	Description: Total number of packets injected by the Stateful Firewall in-line service. Triggers: Increments when a Firewall module creates and sends packets like RST. Availability: Per Active Charging Service Type: Counter	Int64
sfw-total-injectedbytes	Description: Total number of bytes injected by the Stateful Firewall in-line service. Triggers: Increments when a Firewall module creates and sends packets like RST with data. Availability: Per Active Charging Service Type: Counter	Int64
sfw-dnlnk-droppkts	Description: Total number of packets dropped by the Stateful Firewall in-line service in downlink direction. Triggers: Increments when Firewall drops a downlink packet due to any reason. Availability: Per Active Charging Service Type: Counter	Int64
sfw-dnlnk-dropbytes	Description: Total number of bytes dropped by the Stateful Firewall in-line service in downlink direction. Triggers: Increments when Firewall drops a downlink packet with data due to any reason. Availability: Per Active Charging Service Type: Counter	Int64

Variables	Description	Data Type
sfw-uplnk-droppkts	Description: Total number of packets dropped by the Stateful Firewall in-line service in uplink direction. Triggers: Increments when Firewall drops an uplink packet due to any reason. Availability: Per Active Charging Service Type: Counter	Int64
sfw-uplnk-dropbytes	Description: Total number of bytes dropped by the Stateful Firewall in-line service in uplink direction. Triggers: Increments when Firewall drops an uplink packet with data due to any reason. Availability: Per Active Charging Service Type: Counter	Int64
sfw-total-malpackets	Description: Total number of invalid packets received by the Stateful Firewall in-line service. Triggers: Increments when any packet is malformed and dropped by Firewall. Availability: Per Active Charging Service Type: Counter	Int64
sfw-ip-discardpackets	Description: Total number of IP packets discarded by the Stateful Firewall in-line service. Triggers: Increments when any IP packet is discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-ip-malpackets	Description: Total number of invalid IP packets received by the Stateful Firewall in-line service. Triggers: Increments when any IP packet is malformed and discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-icmp-discardpackets	Description: Total number of invalid ICMP packets discarded by the Stateful Firewall in-line service. Triggers: Increments when any ICMP packet is discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-icmp-malpackets	Description: Total number of invalid ICMP packets received by the Stateful Firewall in-line service. Triggers: Increments when any ICMP packet is malformed and discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-tcp-discardpackets	Description: Total number of invalid TCP packets discarded by the Stateful Firewall in-line service. Triggers: Increments when any TCP packet is discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-tcp-malpackets	Description: Total number of invalid TCP packets received by the Stateful Firewall in-line service. Triggers: Increments when any TCP packet is malformed and discarded. Availability: Per Active Charging Service Type: Counter	Int64

Variables	Description	Data Type
sfw-udp-discardpackets	Description: Total number of invalid UDP packets discarded by the Stateful Firewall in-line service. Triggers: Increments when any UDP packet is discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-udp-malpackets	Description: Total number of invalid UDP packets received by the Stateful Firewall in-line service. Triggers: Increments when any UDP packet is malformed and discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-ipv6-discardpackets	Description: Total number of IPv6 packets discarded by the Stateful Firewall in-line service. Triggers: Increments when any IPv6 packet is discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-ipv6-malpackets	Description: Total number of malformed IPv6 packets identified by the Stateful Firewall in-line service. Triggers: Increments when any IPv6 packet is malformed and discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-icmpv6-discardpackets	Description: Total number of ICMPv6 packets discarded by the Stateful Firewall in-line service. Triggers: Increments when any ICMPv6 packet is discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-icmpv6-malpackets	Description: Total number of malformed ICMPv6 packets identified by the Stateful Firewall in-line service. Triggers: Increments when any ICMPv6 packet is malformed and discarded. Availability: Per Active Charging Service Type: Counter	Int64
sfw-total-dosattacks	Description: Total number of DoS attacks detected by the Stateful Firewall in-line service. Triggers: Increments when a DOS attack is detected. Availability: Per Active Charging Service Type: Counter	Int64
sfw-total-flows	Description: Total number of flows processed by the Stateful Firewall in-line service. Triggers: Increments when a new flow is processed by Firewall. Availability: Per Active Charging Service Type: Counter	Int32
dns-local-unknown-atmpts	Description: Total number of local (resolved at system SESSMGR level) Unknown query attempts. Availability: Per DNS Client Type: Counter	Int32

Variables	Description	Data Type
dns-local-a-atmpts	Description: Total number of local (resolved at system SESSMGR level) A (32-bit IPv4 address record) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-local-ns-atmpts	Description: Total number of local (resolved at system SESSMGR level) query attempts to Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-local-cname-atmpts	Description: Total number of local (resolved at system SESSMGR level) CNAME (Canonical Name Record) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-local-ptr-atmpts	Description: Total number of local (resolved at system SESSMGR level) PTR (Pointer Record) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-local-srv-atmpts	Description: Total number of local (resolved at system SESSMGR level) SRV (Service Locator) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-local-aaaa-atmpts	Description: Total number of local (resolved at system SESSMGR level) AAAA (128-bit IPv6 address record) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-local-naptr-atmpts	Description: Total number of local (resolved at system SESSMGR level) NAPTR (Naming Authority Pointer) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-local-unknown-succs	Description: Total number of local (resolved at system SESSMGR level) Unknown query successes. Availability: Per DNS Client Type: Counter	Int32
dns-local-a-succs	Description: Total number of local (resolved at system SESSMGR level) A (32-bit IPv4 address record) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-local-ns-succs	Description: Total number of local (resolved at system SESSMGR level) query successes from Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-local-cname-succs	Description: Total number of local (resolved at system SESSMGR level) CNAME (Canonical Name Record) query successes. Availability: Per DNS Client Type: Counter	Int32

Variables	Description	Data Type
dns-local-ptr-succs	Description: Total number of local (resolved at system SESSMGR level) PTR (Pointer Record) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-local-srv-succs	Description: Total number of local (resolved at system SESSMGR level) SRV (Service Locator) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-local-aaaa-succs	Description: Total number of local (resolved at system SESSMGR level) AAAA (128-bit IPv6 address record) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-local-naptr-succs	Description: Total number of local (resolved at system SESSMGR level) NAPTR (Naming Authority Pointer) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-local-unknown-fails	Description: Total number of local (resolved at system SESSMGR level) Unknown query failures. Availability: Per DNS Client Type: Counter	Int32
dns-local-a-fails	Description: Total number of local (resolved at system SESSMGR level) A (32-bit IPv4 address record) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-local-ns-fails	Description: Total number of local (resolved at system SESSMGR level) query failures from Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-local-cname-fails	Description: Total number of local (resolved at system SESSMGR level) CNAME (Canonical Name Record) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-local-ptr-fails	Description: Total number of local (resolved at system SESSMGR level) PTR (Pointer Record) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-local-srv-fails	Description: Total number of local (resolved at system SESSMGR level) SRV (Service Locator) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-local-aaaa-fails	Description: Total number of local (resolved at system SESSMGR level) AAAA (128-bit IPv6 address record) query failures. Availability: Per DNS Client Type: Counter	Int32

Variables	Description	Data Type
dns-local-naptr-fails	Description: Total number of local (resolved at system SESSMGR level) NAPTR (Naming Authority Pointer) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-local-total-queries	Description: Total number of domain name lookups cached in local (resolved at system SESSMGR level) location. Availability: Per DNS Client Type: Counter	Int32
dns-local-positive-cache-hits	Description: Total number of local (resolved at system SESSMGR level) hits with positive response. Availability: Per DNS Client Type: Counter	Int32
dns-local-negative-cache-hits	Description: Total number of local (resolved at system SESSMGR level) hits with negative response. Availability: Per DNS Client Type: Counter	Int32
dns-local-cache-hits-not-found	Description: Total number of hits which have no record in local (resolved at system SESSMGR level) cache memory. Availability: Per DNS Client Type: Counter	Int32
dns-central-unknown-atmpts	Description: Total number of central (resolved at system VPNMGR level) Unknown query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-central-a-atmpts	Description: Total number of central (resolved at system VPNMGR level) A (32-bit IPv4 address record) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-central-ns-atmpts	Description: Total number of central (resolved at system VPNMGR level) query attempts to Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-central-cname-atmpts	Description: Total number of central (resolved at system VPNMGR level) CNAME (Canonical Name Record) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-central-ptr-atmpts	Description: Total number of central (resolved at system VPNMGR level) PTR (Pointer Record) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-central-srv-atmpts	Description: Total number of central (resolved at system VPNMGR level) SRV (Service Locator) query attempts. Availability: Per DNS Client Type: Counter	Int32

Variables	Description	Data Type
dns-central-aaaa-atmpts	Description: Total number of central (resolved at system VPNMGR level) AAAA (128-bit IPv6 address record) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-central-naptr-atmpts	Description: Total number of central (resolved at system VPNMGR level) NAPTR (Naming Authority Pointer) query attempts. Availability: Per DNS Client Type: Counter	Int32
dns-central-unknown-succs	Description: Total number of central (resolved at system VPNMGR level) Unknown query successes. Availability: Per DNS Client Type: Counter	Int32
dns-central-a-succs	Description: Total number of central (resolved at system VPNMGR level) A (32-bit IPv4 address record) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-central-ns-succs	Description: Total number of central (resolved at system VPNMGR level) query successes from Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-central-cname-succs	Description: Total number of central (resolved at system VPNMGR level) CNAME (Canonical Name Record) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-central-ptr-succs	Description: Total number of central (resolved at system VPNMGR level) PTR (Pointer Record) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-central-srv-succs	Description: Total number of central (resolved at system VPNMGR level) SRV (Service Locator) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-central-aaaa-succs	Description: Total number of central (resolved at system VPNMGR level) AAAA (128-bit IPv6 address record) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-central-naptr-succs	Description: Total number of central (resolved at system VPNMGR level) NAPTR (Naming Authority Pointer) query successes. Availability: Per DNS Client Type: Counter	Int32
dns-central-unknown-fails	Description: Total number of central (resolved at system VPNMGR level) Unknown query failures. Availability: Per DNS Client Type: Counter	Int32

Variables	Description	Data Type
dns-central-a-fails	Description: Total number of central (resolved at system VPNMGR level) A (32-bit IPv4 address record) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-central-ns-fails	Description: Total number of central (resolved at system VPNMGR level) query failures from Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-central-cname-fails	Description: Total number of central (resolved at system VPNMGR level) CNAME (Canonical Name Record) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-central-ptr-fails	Description: Total number of central (resolved at system VPNMGR level) PTR (Pointer Record) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-central-srv-fails	Description: Total number of central (resolved at system VPNMGR level) SRV (Service Locator) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-central-aaaa-fails	Description: Total number of central (resolved at system VPNMGR level) AAAA (128-bit IPv6 address record) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-central-naptr-fails	Description: Total number of central (resolved at system VPNMGR level) NAPTR (Naming Authority Pointer) query failures. Availability: Per DNS Client Type: Counter	Int32
dns-central-total-queries	Description: Total number of domain name lookups cached in central (resolved at system VPNMGR level) location. Availability: Per DNS Client Type: Counter	Int32
dns-central-positive-cache-hits	Description: Total number of central (resolved at system VPNMGR level) hits with positive response. Availability: Per DNS Client Type: Counter	Int32
dns-central-negative-cache-hits	Description: Total number of central (resolved at system VPNMGR level) hits with negative response. Availability: Per DNS Client Type: Counter	Int32
dns-central-cache-hits-not-found	Description: Total number of hits which have no record in central (resolved at system VPNMGR level) cache memory. Availability: Per DNS Client Type: Counter	Int32

Variables	Description	Data Type
dns-primary-ns-unknown-atmpts	Description: Total number of Unknown query attempts resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-a-atmpts	Description: Total number of A (32-bit IPv4 address record) query attempts resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-ns-atmpts	Description: Total number of Name Server query attempts resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-cname-atmpts	Description: Total number of CNAME (Canonical Name Record) query attempts resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-ptr-atmpts	Description: Total number of PTR (Pointer Record) query attempts resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-srv-atmpts	Description: Total number of SRV (Service Locator) query attempts resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-aaaa-atmpts	Description: Total number of AAAA (128-bit IPv6 address record) query attempts resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-naptr-atmpts	Description: Total number of NAPTR (Naming Authority Pointer) query attempts resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-unknown-succs	Description: Total number of Unknown query successes resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-a-succs	Description: Total number of A (32-bit IPv4 address record) query successes resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-ns-succs	Description: Total number of Name Server query successes resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32

Variables	Description	Data Type
dns-primary-ns-cname-succs	Description: Total number of CNAME (Canonical Name Record) query successes resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-ptr-succs	Description: Total number of PTR (Pointer Record) query successes resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-srv-succs	Description: Total number of SRV (Service Locator) query successes resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-aaaa-succs	Description: Total number of AAAA (128-bit IPv6 address record) query successes resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-naptr-succs	Description: Total number of NAPTR (Naming Authority Pointer) query successes resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-unknown-fails	Description: Total number of Unknown query failures resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-a-fails	Description: Total number of A (32-bit IPv4 address record) query failures resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-ns-fails	Description: Total number of Name Server query failures resolved at external Primary Name Server. Type: Counter	Int32
dns-primary-ns-cname-fails	Description: Total number of CNAME (Canonical Name Record) query failures resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-ptr-fails	Description: Total number of PTR (Pointer Record) query failures resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-srv-fails	Description: Total number of SRV (Service Locator) query failures resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32

Variables	Description	Data Type
dns-primary-ns-aaaa-fails	Description: Total number of AAAA (128-bit IPv6 address record) query failures resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-naptr-fails	Description: Total number of NAPTR (Naming Authority Pointer) query failures resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-rsp-rejected	Description: Total number of queries for a domain for which connection refused resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-query-timeouts	Description: Total number of query timeouts resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-primary-ns-domain-not-found	Description: Total number of queries where domain name not found resolved at external Primary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-unknown-attempts	Description: Total number of Unknown query attempts resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-a-attempts	Description: Total number of A (32-bit IPv4 address record) query attempts resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-ns-attempts	Description: Total number of Name Server query attempts resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-cname-attempts	Description: Total number of CNAME (Canonical Name Record) query attempts resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-ptr-attempts	Description: Total number of PTR (Pointer Record) query attempts resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-srv-attempts	Description: Total number of SRV (Service Locator) query attempts resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32

Variables	Description	Data Type
dns-secondary-ns-aaaa-atmpts	Description: Total number of AAAA (128-bit IPv6 address record) query attempts resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-naptr-atmpts	Description: Total number of NAPTR (Naming Authority Pointer) query attempts resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-unknown-succs	Description: Total number of Unknown query successes resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-a-succs	Description: Total number of A (32-bit IPv4 address record) query successes resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-ns-succs	Description: Total number of Name Server query successes resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-cname-succs	Description: Total number of CNAME (Canonical Name Record) query successes resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-ptr-succs	Description: Total number of PTR (Pointer Record) query successes resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-srv-succs	Description: Total number of SRV (Service Locator) query successes resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-aaaa-succs	Description: Total number of AAAA (128-bit IPv6 address record) query successes resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-naptr-succs	Description: Total number of NAPTR (Naming Authority Pointer) query successes resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-unknown-fails	Description: Total number of Unknown query failures resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	

Variables	Description	Data Type
dns-secondary-ns-a-fails	Description: Total number of A (32-bit IPv4 address record) query failures resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-ns-fails	Description: Total number of Name Server query failures resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	
dns-secondary-ns-cname-fails	Description: Total number of CNAME (Canonical Name Record) query failures resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	
dns-secondary-ns-ptr-fails	Description: Total number of PTR (Pointer Record) query failures resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	
dns-secondary-ns-srv-fails	Description: Total number of SRV (Service Locator) query failures resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-aaaa-fails	Description: Total number of AAAA (128-bit IPv6 address record) query failures resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-naptr-fails	Description: Total number of NAPTR (Naming Authority Pointer) query failures resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-rsp-rejected	Description: Total number of queries for a domain for which connection refused resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-query-timeouts	Description: Total number of query timeouts resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
dns-secondary-ns-domain-not-found	Description: Total number of queries where domain name not found resolved at external Secondary Name Server. Availability: Per DNS Client Type: Counter	Int32
bgp-maxroute	Description: Maximum number of BGP routes. It is the sum of all the VRFs in a context. Availability: Per DNS Client Type: Information	Int32

Variables	Description	Data Type
bgp-totroute	Description: Total number of BGP routes. It is the sum of all the VRFs in a context. Availability: Per DNS Client Type: Information	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 11

CS-Network-RANAP Schema Statistics

The CS-Network-RANAP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.



Important: Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 11. Bulk Statistic Variables in the CS-Network-RANAP Schema

Variables	Description	Data Type
nwnname	Indicates the name of the Circuit Switch (CS) Network connected with specific HNB -GW on which statistics are collected or displayed. This is a key variable.	String

Variables	Description	Data Type
dest-pt-code	Indicates the destination point code in SS7 notation of MSC in core network connected with specific HNB-GW of which statistics are collected or displayed. This is a key variable.	String
initial-ue-tx	Indicates the total number of Initial UE message transmitted. Trigger: When Initial UE message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
dir-transfer-rx	Indicates the total number of Direct Transfer message received. Trigger: When Direct Transfer message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
dir-transfer-tx	Indicates the total number of Direct Transfer message transmitted. Trigger: When Direct Transfer message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reset-rx	Indicates the total number of Reset message received. Trigger: When Reset message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reset-tx	Indicates the total number of Reset message transmitted. Trigger: When Reset message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reset-ack-rx	Indicates the total number of Reset Ack message received. Trigger: When Reset Ack message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reset-ack-tx	Indicates the total number of Reset Ack message transmitted. Trigger: When Reset Ack message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reset-res-rx	Indicates the total number of Reset Resource message received. Trigger: When Reset Resource message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reset-res-tx	Indicates the total number of Reset Resource message transmitted. Trigger: When Reset Resource message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reset-res-ack-rx	Indicates the total number of Reset Resource Ack message received. Trigger: When Reset Resource Ack message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reset-res-ack-tx	Indicates the total number of Reset Resource Ack message transmitted. Trigger: When Reset Resource Ack message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
iu-rel-req-tx	Indicates the total number of Iu Release Request message transmitted. Trigger: When Iu Release Request message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
iu-rel-cmd-rx	Indicates the total number of Iu Release Command message received. Trigger: When Iu Release Command message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
iu-rel-comp-tx	Indicates the total number of Iu Release Complete message transmitted. Trigger: When Iu Release Complete message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
paging-req-rx	Indicates the total number of Paging Request message received. Trigger: When Paging Request message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rsp-tx	Indicates the total number of RAB Assignment Response message transmitted. Trigger: When RAB Assignment Response message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rsp-tx-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rsp-tx-total-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rsp-tx-rab-fail-local-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rsp-tx-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Release Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rsp-tx-total-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Release Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rsp-tx-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Release Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rsp-tx-rab-que-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Queued. Availability: Across all CS Networks.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rab-ass-req-rx	Indicates the total number of RAB Assignment Request message is received by CS Network. Trigger: When RAB Assignment Request message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-req-rx-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message is received by CS Network for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by CS Network for RAB Setup/Modify. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-req-rx-rab-rel-rx	Indicates the total number of RAB Assignment Request message is received by CS Network for RAB Release. Trigger: When RAB Assignment Request message is received by CS Network for RAB Release. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rab-setup-mod-timer-exp	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify Timer Expire. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify Timer Expire. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rab-rel-timer-exp	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Release Timer Expire. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Release Timer Expire. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rab-setup-mod-rel-local-failure	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-local-fail-invalid-rab-id	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Radio Network Layer cause Invalid Rab Id. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Radio Network Layer cause Invalid Rab Id. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-local-fail-interact-with-othr-proc	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Radio Network Layer cause Interaction With Other Proc. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Radio Network Layer cause Interaction With Other Proc. Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
rab-ass-local-fail-sig-trans-res-fail	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Transport Layer cause Sig Transport Resource Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Transport Layer cause Sig Transport Resource Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-local-fail-iu-conn-fail-to-estab	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Transport Layer cause Iu Transport Conn failed to Establish. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Transport Layer cause Iu Transport Conn failed to Establish. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-local-fail-trans-syn-err	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Transfer syntax error. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Transfer syntax error. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-local-fail-abs-syn-err-ign	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Abstract syntax error(Ignore). Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Abstract syntax error(Ignore). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-local-fail-semantic-err	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Semantic error. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Semantic error. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-local-fail-abs-syn-err-rej	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Abstract syntax error (Reject). Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Abstract syntax error (Reject). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-local-fail-msg-not-comp	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Msg not compatible with receiver state. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Msg not compatible with receiver state. Availability: Across all CS Networks.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rab-ass-local-fail-falsely-construct-msg	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Abstract syntax error (Falsely constructed msg). Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer cause Abstract syntax error (Falsely constructed msg). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-local-fail-no-res-avalable	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Miscellaneous cause No Resource Available. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Miscellaneous cause No Resource Available. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-rep-rx-local-fail-unspecified	Indicates the total number of RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Miscellaneous cause Unspecified. Trigger: When RAB Assignment Response message is transmitted by CS Network for RAB Setup/Modify/Release Local Failure with Miscellaneous cause Unspecified. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr-codec-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with AMR Codec for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by CS Network with AMR Codec for RAB Setup/Modify. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr-codec-rab-rel-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with AMR Codec for RAB Release. Trigger: When RAB Assignment Request message is received by CS Network with AMR Codec for RAB Release. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr-codec-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Setup/Modify Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr-codec-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Setup/Modify Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr-codec-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Setup/Modify Fail (Local). Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
rab-ass-amr-codec-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Release Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr-codec-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Release Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr-codec-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Release Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr-codec-rab-que-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR Codec for RAB Queued. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr2-codec-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with AMR2 Codec for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by CS Network with AMR2 Codec for RAB Setup/Modify. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr2-codec-rab-rel-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with AMR2 Codec for RAB Release. Trigger: When RAB Assignment Request message is received by CS Network with AMR2 Codec for RAB Release. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr2-codec-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Setup/Modify Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr2-codec-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Setup/Modify Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr2-codec-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Setup/Modify Fail (Local). Availability: Across all CS Networks.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rab-ass-amr2-codec-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Release Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr2-codec-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Release Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr2-codec-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Release Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-amr2-codec-rab-que-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by CS Network with AMR2 Codec for RAB Queued. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-other-codec-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with Other Codec for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by CS Network with Other Codec for RAB Setup/Modify. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-other-codec-rab-rel-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with Other Codec for RAB Release. Trigger: When RAB Assignment Request message is received by CS Network with Other Codec for RAB Release. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-other-codec-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Setup/Modify Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-other-codec-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Setup/Modify Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-other-codec-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Setup/Modify Fail (Local). Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
rab-ass-other-codec-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Release Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-other-codec-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Release Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-other-codec-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with Other Codec for RAB Release Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-other-codec-rab-que-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Other Codec Class for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by CS Network with Other Codec Class for RAB Queued. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-no-codec-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with No Codec for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by CS Network with No Codec for RAB Setup/Modify. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-no-codec-rab-rel-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with No Codec for RAB Release. Trigger: When RAB Assignment Request message is received by CS Network with No Codec for RAB Release. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-no-codec-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Setup/Modify Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-no-codec-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Setup/Modify Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-no-codec-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Setup/Modify Fail (Local). Availability: Across all CS Networks.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rab-ass-no-codec-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Release Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-no-codec-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Release Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-no-codec-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Release Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-no-codec-rab-que-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by CS Network with No Codec for RAB Queued. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-unkwn-codec-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with Unknown Codec for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by CS Network with Unknown Codec for RAB Setup/Modify. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-unkwn-codec-rab-rel-rx	Indicates the total number of RAB Assignment Request message is received by CS Network with Unknown Codec for RAB Release. Trigger: When RAB Assignment Request message is received by CS Network with Unknown Codec for RAB Release. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-unkwn-codec-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Setup/Modify Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-unkwn-codec-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Setup/Modify Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-unkwn-codec-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Setup/Modify Fail (Local). Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
rab-ass-unkwn-codec-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Release Success. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-unkwn-codec-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Release Fail. Availability: Across all CS Networks.	Unsigned Int32
rab-ass-unkwn-codec-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Release Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
rab-ass-unkwn-codec-rab-que-tx	Indicates the total number of RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by CS Network with Unknown Codec for RAB Queued. Availability: Across all CS Networks.	Unsigned Int32
rab-time	Indicates the total duration in seconds when RAB was active in CS Network. Trigger: When RAB become inactive in CS Network. Availability: Across all CS Networks.	Unsigned Int64
reloc-req-rx	Indicates the total number of Relocation Request message is received by CS Network. Trigger: When Relocation Request message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-rx-rab-setup-rx	Indicates the total number of Relocation Request message is received by CS Network for RAB Setup. Trigger: When Relocation Request message is received by CS Network for RAB Setup. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network. Trigger: When Relocation Request Ack message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-tx-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for RAB Setup Success. Trigger: When Relocation Request Ack is transmitted by CS Network for RAB Setup Success. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-tx-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for RAB Setup Fail. Trigger: When Relocation Request Ack is transmitted by CS Network for RAB Setup Fail. Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
reloc-req-ack-tx-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for RAB Setup Fail (Local). Trigger: When Relocation Request Ack is transmitted by CS Network for RAB Setup Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-invalid-rab-id	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Radio Network Layer cause Invalid Rab Id. Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Radio Network Layer cause Invalid Rab Id. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-interact-othr-proc	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Radio Network Layer cause Interaction With Other Proc. Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Radio Network Layer cause Interaction With Other Proc. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-sig-trans-res-fail	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Transport Layer cause Sig Transport Resource Fail. Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Transport Layer cause Sig Transport Resource Fail. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-iu-conn-fail-to-estab	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Transport Layer cause Iu Transport Conn failed to Establish. Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Transport Layer cause Iu Transport Conn failed to Establish. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-trans-syn-err	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Transfer syntax error. Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Transfer syntax error. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-abs-syn-err-ign	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Abstract syntax error(Ignore). Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Abstract syntax error(Ignore). Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-semantic-err	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Semantic error. Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Semantic error. Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
reloc-req-ack-local-fail-abs-syn-err-rej	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Abstract syntax error (Reject). Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Abstract syntax error (Reject). Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-msg-not-comp	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Msg not compatible with receiver state. Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Msg not compatible with receiver state. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-falsely-construct-msg	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Abstract syntax error (Falsely constructed msg). Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Protocol Layer cause Abstract syntax error (Falsely constructed msg). Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-no-res-avalable	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Miscellaneous cause No Resource Available. Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Miscellaneous cause No Resource Available. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-ack-local-fail-unspecified	Indicates the total number of Relocation Request Ack message is transmitted by CS Network for Local RAB Setup Failure with Miscellaneous cause Unspecified. Trigger: When Relocation Request Ack is transmitted by CS Network for Local RAB Setup Failure with Miscellaneous cause Unspecified. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-amr-codec-rab-setup-rx	Indicates the total number of Relocation Request message is received by CS Network with AMR Codec for RAB Setup. Trigger: When Relocation Request message is received by CS Network with AMR Codec for RAB Setup. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-amr-codec-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with AMR Codec for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by CS Network with AMR Codec for RAB Setup Success. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-amr-codec-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with AMR Codec for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by CS Network with AMR Codec for RAB Setup Fail. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-amr-codec-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with AMR Codec for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by CS Network with AMR Codec for RAB Setup Fail (Local). Availability: Across all CS Networks.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
reloc-req-amr2-codec-rab-setup-rx	Indicates the total number of Relocation Request message is received by CS Network with AMR2 Codec for RAB Setup. Trigger: When Relocation Request message is received by CS Network with AMR2 Codec for RAB Setup. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-amr2-codec-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with AMR2 Codec for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by CS Network with AMR2 Codec for RAB Setup Success. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-amr2-codec-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with AMR2 Codec for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by CS Network with AMR2 Codec for RAB Setup Fail. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-amr2-codec-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with AMR2 Codec for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by CS Network with AMR2 Codec for RAB Setup Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
reloc-req-other-codec-rab-setup-rx	Indicates the total number of Relocation Request message is received by CS Network with Other Codec for RAB Setup. Trigger: When Relocation Request message is received by CS Network with Other Codec for RAB Setup. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-other-codec-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with Other Codec for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by CS Network with Other Codec for RAB Setup Success. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-other-codec-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with Other Codec for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by CS Network with Other Codec for RAB Setup Fail. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-other-codec-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with Other Codec for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by CS Network with Other Codec for RAB Setup Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
reloc-req-no-codec-rab-setup-rx	Indicates the total number of Relocation Request message is received by CS Network with No Codec for RAB Setup. Trigger: When Relocation Request message is received by CS Network with No Codec for RAB Setup. Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
reloc-req-no-codec-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with No Codec for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by CS Network with No Codec for RAB Setup Success. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-no-codec-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with No Codec for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by CS Network with No Codec for RAB Setup Fail. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-no-codec-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with No Codec for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by CS Network with No Codec for RAB Setup Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
reloc-req-unkwn-codec-rab-setup-rx	Indicates the total number of Relocation Request message is received by CS Network with Unknown Codec for RAB Setup. Trigger: When Relocation Request message is received by CS Network with Unknown Codec for RAB Setup. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-unkwn-codec-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with Unknown Codec for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by CS Network with Unknown Codec for RAB Setup Success. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-unkwn-codec-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with Unknown Codec for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by CS Network with Unknown Codec for RAB Setup Fail. Availability: Across all CS Networks.	Unsigned Int32
reloc-req-unkwn-codec-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message is transmitted by CS Network with Unknown Codec for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by CS Network with Unknown Codec for RAB Setup Fail (Local). Availability: Across all CS Networks.	Unsigned Int32
reloc-detect-tx	Indicates the total number of Relocation Detect message is transmitted by CS Network. Trigger: When Relocation Detect message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
reloc-comp-tx	Indicates the total number of Relocation Complete message is transmitted by CS Network. Trigger: When Relocation Complete message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
total-reloc-fail-tx	Indicates the total number of Relocation Failure message is transmitted by CS Network. Trigger: When Relocation Failure is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
reloc-fail-local-tx	Indicates the total number of Relocation Failure message is transmitted by CS Network for Relocation Failure (Local). Trigger: When Relocation Failure is transmitted by CS Network for Relocation Failure (Local). Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-invalid-rab-id	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Radio Network Layer cause Invalid RAB Id. Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Radio Network Layer cause Invalid RAB Id. Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-interact-othr-proc	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Radio Network Layer Cause Interaction with other procedure.. Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Radio Network Layer Cause Interaction with other procedure.. Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-sig-trans-res-fail	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Transport Layer cause Sig Transport Resource Fail. Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Transport Layer cause Sig Transport Resource Fail. Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-iu-conn-fail-to-estab	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Transport Layer cause Iu Transport Conn failed to Establish. Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Transport Layer cause Iu Transport Conn failed to Establish. Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-trans-syn-err	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Protocol Layer cause Transfer syntax error. Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Protocol Layer cause Transfer syntax error. Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-abs-syn-err-ign	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Protocol Layer cause Abstract syntax error(Ignore). Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Protocol Layer cause Abstract syntax error(Ignore). Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-semantic-err	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Protocol Layer cause Semantic error. Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Protocol Layer cause Semantic error. Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-abs-syn-err-rej	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Protocol Layer cause Abstract syntax error(Reject). Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Protocol Layer cause Abstract syntax error(Reject). Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
reloc-fail-tx-local-fail-msg-not-comp	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Protocol Layer cause Msg not compatible with receiver state. Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Protocol Layer cause Msg not compatible with receiver state. Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-falsely-construct-msg	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Protocol Layer cause Abstract syntax error (Falsely constructed msg). Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Protocol Layer cause Abstract syntax error (Falsely constructed msg). Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-no-res-available	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Miscellaneous cause No Resource Available. Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Miscellaneous cause No Resource Available. Availability: Across all CS Networks.	Unsigned Int32
reloc-fail-tx-local-fail-unspecified	Indicates the total number of Relocation Failure message received by CS Network for Local Relocation Failure with Miscellaneous cause Unspecified. Trigger: When Relocation Failure message is received by CS Network for Local Relocation Failure with Miscellaneous cause Unspecified. Availability: Across all CS Networks.	Unsigned Int32
reloc-reqd-tx	Indicates the total number of Relocation Required message is transmitted by CS Network. Trigger: When Relocation Required message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
fwd-srms-ctx-req-tx	Indicates the total number of Relocation Prep Failure message received by CS Network. Trigger: When Relocation Prep Failure message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
srms-ctx-req-rx	Indicates the total number of Fwd SRNS Context Request message is transmitted by CS Network. Trigger: When Fwd SRNS Context Request message is transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
srms-ctx-rsp-tx	Indicates the total number of Relocation Command message received by CS Network. Trigger: When Relocation Command message is received by CS Network. Availability: Across all CS Networks.	Unsigned Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 12

CS-Network-RTP Schema Statistics

The CS-Network-RTP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 12. Bulk Statistic Variables in the CS-Network-RTP Schema

Variables	Description	Data Type
nwname	Indicates the name of the Circuit Switch (CS) Network connected with specific HNB-GW on which statistics are collected or displayed. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
dest-pt-code	Indicates the destination point code in SS7 notation of MSC in core network connected with specific HNB-GW of which statistics are collected or displayed. This is a key variable.	String
rtp-uplink-pkts-tx	Indicates the total number of RTP Uplink Packets transmitted. Trigger: When RTP Uplink Packets are transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtp-uplink-byts-tx	Indicates the total number of RTP Uplink Bytes transmitted. Trigger: When RTP Uplink Bytes are transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtp-downlink-pkts-rx	Indicates the total number of RTP Downlink Packets received. Trigger: When RTP Downlink Packets are received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtp-downlink-byts-rx	Indicates the total number of RTP Downlink Bytes received. Trigger: When RTP Downlink Bytes are received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtp-downlink-pkts-dropped	Indicates the total number of RTP Downlink Packets dropped. Trigger: When RTP Downlink Packets are dropped by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtp-downlink-pkts-drop-rab_not-in_conn_state	Indicates the total number of RTP Downlink Packets dropped with cause RAB not in CONNETED state. Trigger: When RTP Downlink Packets are dropped by CS Network with cause RAB not in CONNETED state. Availability: Across all CS Networks.	Unsigned Int32
rtp-downlink-pkts-dropped-misc	Indicates the total number of RTP Downlink Packets dropped with cause Miscellaneous. Trigger: When RTP Downlink Packets are dropped by CS Network with cause Miscellaneous. Availability: Across all CS Networks.	Unsigned Int32
rtp-downlink-byts-dropped	Indicates the total number of RTP Downlink Bytes dropped. Trigger: When RTP Downlink Bytes are dropped by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtp-downlink-byts-drop-rab_not-in_conn_state	Indicates the total number of RTP Downlink Bytes dropped with cause RAB not in CONNETED state. Trigger: When RTP Downlink Bytes are dropped by CS Network with cause RAB not in CONNETED state. Availability: Across all CS Networks.	Unsigned Int32
rtp-downlink-byts-dropped-misc	Indicates the total number of RTP Downlink Bytes dropped with cause Miscellaneous. Trigger: When RTP Downlink Bytes are dropped by CS Network with cause Miscellaneous. Availability: Across all CS Networks.	Unsigned Int32
rtcp-uplink-pkts-tx	Indicates the total number of RTCP Uplink Packets transmitted. Trigger: When RTCP Uplink Packets are transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32

Variables	Description	Data Type
rtcp-uplink-byts-tx	Indicates the total number of RTCP Uplink Bytes transmitted. Trigger: When RTCP Uplink Bytes are transmitted by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtcp-downlink-pkts-rx	Indicates the total number of RTCP Downlink Packets received. Trigger: When RTCP Downlink Packets are received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtcp-downlink-byts-rx	Indicates the total number of RTCP Downlink Bytes received. Trigger: When RTCP Downlink Bytes are received by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtcp-downlink-pkts-dropped	Indicates the total number of RTCP Downlink Packets dropped. Trigger: When RTCP Downlink Packets are dropped by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtcp-downlink-pkts-drop-rab_not-in_conn_state	Indicates the total number of RTCP Downlink Packets dropped with cause RAB not in CONNETED state. Trigger: When RTCP Downlink Packets are dropped by CS Network with cause RAB not in CONNETED state. Availability: Across all CS Networks.	Unsigned Int32
rtcp-downlink-pkts-dropped-misc	Indicates the total number of RTCP Downlink Packets dropped with cause Miscellaneous. Trigger: When RTCP Downlink Packets are dropped by CS Network with cause Miscellaneous. Availability: Across all CS Networks.	Unsigned Int32
rtcp-downlink-byts-dropped	Indicates the total number of RTCP Downlink Bytes dropped. Trigger: When RTCP Downlink Bytes are dropped by CS Network. Availability: Across all CS Networks.	Unsigned Int32
rtcp-downlink-byts-drop-rab_not-in_conn_state	Indicates the total number of RTCP Downlink Bytes dropped with cause RAB not in CONNETED state. Trigger: When RTCP Downlink Bytes are dropped by CS Network with cause RAB not in CONNETED state. Availability: Across all CS Networks.	Unsigned Int32
rtcp-downlink-byts-dropped-misc	Indicates the total number of RTCP Downlink Bytes dropped with cause Miscellaneous. Trigger: When RTCP Downlink Bytes are dropped by CS Network with cause Miscellaneous. Availability: Across all CS Networks.	Unsigned Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 13

CSCF Schema Statistics

The CSCF schema provides operational statistics that can be used for monitoring and troubleshooting the following products: SCM

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 13. Bulk Statistic Variables in the CSCF Schema

Variables	Description	Data Type
vpnname	VPN Name This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	VPN ID This is a key variable. Type: Information	Int32
svcname	Service Name This is a key variable. Type: Information	String
svcid	Service ID This is a key variable. Type: Information	Int32
curregusers	Current Registered Users Type: Gauge	Int32
failedauth	Total number of Failed Authentications. Type: Counter	Int64
regexp	Total number of Registration Expires. Type: Counter	Int64
total-roaming-ue-regs	Total number of Registrations from Roaming UE. Type: Counter	Int64
total-roaming-ue-succ-regs	Total number of 200 OK Registrations from Roaming UE. Type: Counter	Int64
total-roaming-ue-fail-regs	Total number of Failed Registrations from Roaming UE. Type: Counter	Int64
total-roaming-ue-regs-403	Total number of 403 responses to Registration from Roaming UE. Type: Counter	Int64
total-roaming-ue-re-regs	Total number of Re-Registrations from Roaming UE. Type: Counter	Int64
total-roaming-ue-succ-re-regs	Total number of 200 OK Re-Registrations from Roaming UE. Type: Counter	Int64
total-roaming-ue-fail-re-regs	Total number of Failed Re-Registrations from Roaming UE. Type: Counter	Int64
total-roaming-ue-re-regs-403	Total number of 403 responses to Re-Registration from Roaming UE. Type: Counter	Int64
total-roaming-ue-de-regs	Total number of De-Registrations from Roaming UE. Type: Counter	Int64
total-roaming-ue-succ-de-regs	Total number of 200 OK De-Registrations from Roaming UE. Type: Counter	Int64
total-roaming-ue-fail-de-regs	Total number of Failed De-Registrations from Roaming UE. Type: Counter	Int64
total-roaming-ue-de-regs-403	Total number of 403 responses to De-Registration from Roaming UE. Type: Counter	Int64

Variables	Description	Data Type
de-regs-fromue	Total number of De-registrations from UE. Type: Counter	Int64
de-regs-fromnw	Total number of De-registrations from Network. Type: Counter	Int64
sec-regs	Total number of Secure Registrations. Type: Counter	Int64
fail-sec-regs	Total number of Failed Secure Registrations Type: Counter	Int64
emerg-regs	Total number of Emergency Registrations. Type: Counter	Int64
mo-call-succ-rate	Mobile Originating calls success rate. Type: Gauge	Float
mt-call-succ-rate	Mobile Terminating calls success rate. Type: Gauge	Float
mo-voice-call-succ-rate	Mobile Originating VOICE calls success rate. Type: Gauge	Float
mt-voice-call-succ-rate	Mobile Terminating VOICE calls success rate. Type: Gauge	Float
mo-video-call-succ-rate	Mobile Originating VIDEO calls success rate. Type: Gauge	Float
mt-video-call-succ-rate	Mobile Terminating VIDEO calls success rate. Type: Gauge	Float
callattrx	Total number of Call Attempts received. Type: Counter	Int64
callatttx	Total number of Call Attempts transmitted. Type: Counter	Int64
callsucrx	Total number of Call Success received. Type: Counter	Int64
callsuctx	Total number of Call Success transmitted. Type: Counter	Int64
callfailrx	Total number of Call Failures received. Type: Counter	Int64
callfailtx	Total number of Call Failures transmitted. Type: Counter	Int64
curcscfssess	Total number of current CSCF Sessions. Type: Gauge	Int32
totalcscfssess	Total number of CSCF Sessions. Type: Counter	Int64

Variables	Description	Data Type
call-resp-3xxrx	Total number of Call 3xx Responses received. Type: Counter	Int64
call-resp-3xxtx	Total number of Call 3xx Responses transmitted. Type: Counter	Int64
call-resp-402rx	Total number of Call 402 Responses received. Type: Counter	Int64
call-resp-402tx	Total number of Call 402 Responses transmitted. Type: Counter	Int64
call-resp-403rx	Total number of Call 403 Responses received. Type: Counter	Int64
call-resp-403tx	Total number of Call 403 Responses transmitted. Type: Counter	Int64
call-resp-404rx	Total number of Call 404 Responses received. Type: Counter	Int64
call-resp-404tx	Total number of Call 404 Responses transmitted. Type: Counter	Int64
call-resp-407rx	Total number of Call 407 Responses received. Type: Counter	Int64
call-resp-407tx	Total number of Call 407 Responses transmitted. Type: Counter	Int64
call-resp-408rx	Total number of Call 408 Responses received. Type: Counter	Int64
call-resp-408tx	Total number of Call 408 Responses transmitted. Type: Counter	Int64
call-resp-420rx	Total number of Call 420 Responses received. Type: Counter	Int64
call-resp-420tx	Total number of Call 420 Responses transmitted. Type: Counter	Int64
call-resp-421rx	Total number of Call 421 Responses received. Type: Counter	Int64
call-resp-421tx	Total number of Call 421 Responses transmitted. Type: Counter	Int64
call-resp-480rx	Total number of Call 480 Responses received. Type: Counter	Int64
call-resp-480tx	Total number of Call 480 Responses transmitted. Type: Counter	Int64
call-resp-486rx	Total number of Call 486 Responses received. Type: Counter	Int64

Variables	Description	Data Type
call-resp-486tx	Total number of Call486 Responses transmitted. Type: Counter	Int64
call-resp-487rx	Total number of Call487 Responses received. Type: Counter	Int64
call-resp-487tx	Total number of Call487 Responses transmitted. Type: Counter	Int64
call-resp-488rx	Total number of Call488 Responses received. Type: Counter	Int64
call-resp-488tx	Total number of Call488 Responses transmitted. Type: Counter	Int64
call-resp-4xxrx	Total number of Call4xx Responses received. Type: Counter	Int64
call-resp-4xxtx	Total number of Call4xx Responses transmitted. Type: Counter	Int64
call-resp-500rx	Total number of Call500 Responses received. Type: Counter	Int64
call-resp-500tx	Total number of Call500 Responses transmitted. Type: Counter	Int64
call-resp-503rx	Total number of Call503 Responses received. Type: Counter	Int64
call-resp-503tx	Total number of Call503 Responses transmitted. Type: Counter	Int64
call-resp-5xxrx	Total number of Call5xx Responses received. Type: Counter	Int64
call-resp-5xxtx	Total number of Call5xx Responses transmitted. Type: Counter	Int64
call-resp-6xxrx	Total number of Call6xx Responses received. Type: Counter	Int64
call-resp-6xxtx	Total number of Call6xx Responses transmitted. Type: Counter	Int64
call-rel-atrrx	Total number of CallRelease Attempts received. Type: Counter	Int64
call-rel-atttx	Total number of CallRelease Attempts transmitted. Type: Counter	Int64
call-rel-succrx	Total number of CallRelease Success received. Type: Counter	Int64
call-rel-succtx	Total number of CallRelease Success transmitted. Type: Counter	Int64

Variables	Description	Data Type
call-rel-failrx	Total number of Call Release Failures received. Type: Counter	Int64
call-rel-failtx	Total number of Call Release Failures transmitted. Type: Counter	Int64
reg-attrx	Total number of Registration Attempts received. Type: Counter	Int64
reg-atttx	Total number of Registration Attempts transmitted. Type: Counter	Int64
reg-succrx	Total number of Registration Successes received. Type: Counter	Int64
reg-succtx	Total number of Registration Successes transmitted. Type: Counter	Int64
reg-failrx	Total number of Registration Failures received. Type: Counter	Int64
reg-failtx	Total number of Registration Failures transmitted. Type: Counter	Int64
reg-resp-401rx	Total number of Registration 401 Responses received. Type: Counter	Int64
reg-resp-401tx	Total number of Registration 401 Responses transmitted. Type: Counter	Int64
reg-resp-403rx	Total number of Registration 403 Responses received. Type: Counter	Int64
reg-resp-403tx	Total number of Registration 403 Responses transmitted. Type: Counter	Int64
reg-resp-404rx	Total number of Registration 404 Responses received. Type: Counter	Int64
reg-resp-404tx	Total number of Registration 404 Responses transmitted. Type: Counter	Int64
reg-resp-420rx	Total number of Registration 420 Responses received. Type: Counter	Int64
reg-resp-420tx	Total number of Registration 420 Responses transmitted. Type: Counter	Int64
reg-resp-439rx	Total number of Registration 439 Responses received. Type: Counter	Int64
reg-resp-439tx	Total number of Registration 439 Responses transmitted. Type: Counter	Int64
reg-resp-4xxrx	Total number of Registration 4xx Responses received. Type: Counter	Int64

Variables	Description	Data Type
reg-resp-4xxtx	Total number of Registration 4xx Responses transmitted. Type: Counter	Int64
reg-resp-500rx	Total number of Registration 500 Responses received. Type: Counter	Int64
reg-resp-500tx	Total number of Registration 500 Responses transmitted. Type: Counter	Int64
reg-resp-5xxrx	Total number of Registration 5xx Responses received. Type: Counter	Int64
reg-resp-5xxtx	Total number of Registration 5xx Responses transmitted. Type: Counter	Int64
reg-resp-6xxrx	Total number of Registration 6xx Responses received. Type: Counter	Int64
reg-resp-6xxtx	Total number of Registration 6xx Responses transmitted. Type: Counter	Int64
rereg-attrx	Total number of Refresh Registration Attempts received. Type: Counter	Int64
rereg-atttx	Total number of Refresh Registration Attempts transmitted. Type: Counter	Int64
rereg-succrx	Total Refresh Registration Successes received. Type: Counter	Int64
rereg-succtx	Total number of Refresh Registration Successes transmitted. Type: Counter	Int64
rereg-failrx	Total number of Refresh Registration Failures received. Type: Counter	Int64
rereg-failtx	Total number of Refresh Registration Failures transmitted. Type: Counter	Int64
rereg-resp-401rx	Total number of Refresh Registration 401 Responses received. Type: Counter	Int64
rereg-resp-401tx	Total number of Refresh Registration 401 Responses transmitted. Type: Counter	Int64
rereg-resp-403rx	Total number of Refresh Registration 403 Responses received. Type: Counter	Int64
rereg-resp-403tx	Total number of Refresh Registration 403 Responses transmitted. Type: Counter	Int64
rereg-resp-404rx	Total number of Refresh Registration 404 Responses received. Type: Counter	Int64
rereg-resp-404tx	Total number of Refresh Registration 404 Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
rereg-resp-420rx	Total number of Refresh Registration 420 Responses received. Type: Counter	Int64
rereg-resp-420tx	Total number of Refresh Registration 420 Responses transmitted. Type: Counter	Int64
rereg-resp-439rx	Total number of Refresh Registration 439 Responses received. Type: Counter	Int64
rereg-resp-439tx	Total number of Refresh Registration 439 Responses transmitted. Type: Counter	Int64
rereg-resp-4xxrx	Total number of Refresh Registration 4xx Responses received. Type: Counter	Int64
rereg-resp-4xxtx	Total number of Refresh Registration 4xx Responses transmitted. Type: Counter	Int64
rereg-resp-500rx	Total number of Refresh Registration 500 Responses received. Type: Counter	Int64
rereg-resp-500tx	Total number of Refresh Registration 500 Responses transmitted. Type: Counter	Int64
rereg-resp-5xxrx	Total number of Refresh Registration 5xx Responses received. Type: Counter	Int64
rereg-resp-5xxtx	Total number of Refresh Registration 5xx Responses transmitted. Type: Counter	Int64
rereg-resp-6xxrx	Total number of Refresh Registration 6xx Responses received. Type: Counter	Int64
rereg-resp-6xxtx	Total number of Refresh Registration 6xx Responses transmitted. Type: Counter	Int64
dereg-atrx	Total number of Deregistration Attempts received. Type: Counter	Int64
dereg-attx	Total number of Deregistration Attempts transmitted. Type: Counter	Int64
dereg-succrx	Total number of Deregistration Successes received. Type: Counter	Int64
dereg-succtx	Total number of Deregistration Successes transmitted. Type: Counter	Int64
dereg-failrx	Total number of Deregistration Failures received. Type: Counter	Int64
dereg-failtx	Total number of Deregistration Failures transmitted. Type: Counter	Int64
dereg-resp-401rx	Total number of Deregister 401 Responses received. Type: Counter	Int64

Variables	Description	Data Type
dereg-resp-401tx	Total number of Deregister 401 Responses transmitted. Type: Counter	Int64
dereg-resp-403rx	Total number of Deregister 403 Responses received. Type: Counter	Int64
dereg-resp-403tx	Total number of Deregister 403 Responses transmitted. Type: Counter	Int64
dereg-resp-404rx	Total number of Deregister 404 Responses received. Type: Counter	Int64
dereg-resp-404tx	Total number of Deregister 404 Responses transmitted. Type: Counter	Int64
dereg-resp-420rx	Total number of Deregister 420 Responses received. Type: Counter	Int64
dereg-resp-420tx	Total number of Deregister 420 Responses transmitted. Type: Counter	Int64
dereg-resp-4xxrx	Total number of Deregister 4xx Responses received. Type: Counter	Int64
dereg-resp-4xxtx	Total number of Deregister 4xx Responses transmitted. Type: Counter	Int64
dereg-resp-500rx	Total number of Deregister 500 Responses received. Type: Counter	Int64
dereg-resp-500tx	Total number of Deregister 500 Responses transmitted. Type: Counter	Int64
dereg-resp-5xxrx	Total number of Deregister 5xx Responses received. Type: Counter	Int64
dereg-resp-5xxtx	Total number of Deregister 5xx Responses transmitted. Type: Counter	Int64
dereg-resp-6xxrx	Total number of Deregister 6xx Responses received. Type: Counter	Int64
dereg-resp-6xxtx	Total number of Deregister 6xx Responses transmitted. Type: Counter	Int64
subscribe-attempt-rx	Total number of Subscribe attempts received. Type: Counter	Int64
subscribe-attempt-tx	Total number of Subscribe attempts transmitted. Type: Counter	Int64
subscribe-success-rx	Total number of Subscribe successes received. Type: Counter	Int64
subscribe-success-tx	Total number of Subscribe successes transmitted. Type: Counter	Int64

Variables	Description	Data Type
subscribe-failure-rx	Total number of Subscribe failures received. Type: Counter	Int64
subscribe-failure-tx	Total number of Subscribe failures transmitted. Type: Counter	Int64
notify-attempt-rx	Total number of Notify attempts received. Type: Counter	Int64
notify-attempt-tx	Total number of Notify attempts transmitted. Type: Counter	Int64
notify-success-rx	Total number of Notify successes received. Type: Counter	Int64
notify-success-tx	Total number of Notify successes transmitted. Type: Counter	Int64
notify-failure-rx	Total number of Notify failures received. Type: Counter	Int64
notify-failure-tx	Total number of Notify failures transmitted. Type: Counter	Int64
publish-attempt-rx	Total number of Publish attempts received. Type: Counter	Int64
publish-attempt-tx	Total number of Publish Attempts attempts transmitted. Type: Counter	Int64
publish-success-rx	Total number of Publish successes received. Type: Counter	Int64
publish-success-tx	Total number of Publish successes transmitted. Type: Counter	Int64
publish-failure-rx	Total number of Publish failures received. Type: Counter	Int64
publish-failure-tx	Total number of Publish failures transmitted. Type: Counter	Int64
msgsum-subs-atrx	Total number of “msg-summary” Subscription attempts received. Type: Counter	Int64
msgsum-subs-attx	Total number of “msg-summary” Subscription attempts transmitted. Type: Counter	Int64
msgsum-subs-sucrx	Total number of “msg-summary” Subscription successes received. Type: Counter	Int64
msgsum-subs-suctx	Total number of “msg-summary” Subscription successes transmitted. Type: Counter	Int64
msgsum-subs-failrx	Total number of “msg-summary” Subscription failures received. Type: Counter	Int64

Variables	Description	Data Type
msgsum-subs-failtx	Total number of “msg-summary” Subscription failures transmitted. Type: Counter	Int64
msgsum-subs-resp-200rx	Total number of “msg-summary” Subscription 200 Responses received. Type: Counter	Int64
msgsum-subs-resp-200tx	Total number of “msg-summary” Subscription 200 Responses transmitted. Type: Counter	Int64
msgsum-subs-resp-202rx	Total number of “msg-summary” Subscription 202 Responses received. Type: Counter	Int64
msgsum-subs-resp-202tx	Total number of “msg-summary” Subscription 202 Responses transmitted. Type: Counter	Int64
msgsum-subs-resp-400rx	Total number of “msg-summary” Subscription 400 Responses received. Type: Counter	Int64
msgsum-subs-resp-400tx	Total number of “msg-summary” Subscription 400 Responses transmitted. Type: Counter	Int64
msgsum-subs-resp-403rx	Total number of “msg-summary” Subscription 403 Responses received. Type: Counter	Int64
msgsum-subs-resp-403tx	Total number of “msg-summary” Subscription 403 Responses transmitted. Type: Counter	Int64
msgsum-subs-resp-481rx	Total number of “msg-summary” Subscription 481 Responses received. Type: Counter	Int64
msgsum-subs-resp-481tx	Total number of “msg-summary” Subscription 481 Responses transmitted. Type: Counter	Int64
msgsum-subs-resp-489rx	Total number of “msg-summary” Subscription 489 Responses received. Type: Counter	Int64
msgsum-subs-resp-489tx	Total number of “msg-summary” Subscription 489 Responses transmitted. Type: Counter	Int64
msgsum-subs-resp-500rx	Total number of “msg-summary” Subscription 500 Responses received. Type: Counter	Int64
msgsum-subs-resp-500tx	Total number of “msg-summary” Subscription 500 Responses transmitted. Type: Counter	Int64
msgsum-subs-resp-3xxrx	Total number of “msg-summary” Subscription 3XX Responses received. Type: Counter	Int64
msgsum-subs-resp-3xxtx	Total number of “msg-summary” Subscription 3XX Responses transmitted. Type: Counter	Int64
msgsum-subs-resp-4xxrx	Total number of “msg-summary” Subscription 4XX Responses received. Type: Counter	Int64
msgsum-subs-resp-4xxtx	Total number of “msg-summary” Subscription 4XX Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
msgsum-subs-resp-5xxrx	Total number of “msg-summary” Subscription 5XX Responses received. Type: Counter	Int64
msgsum-subs-resp-5xxtx	Total number of “msg-summary” Subscription 5XX Responses transmitted. Type: Counter	Int64
msgsum-subs-resp-6xxrx	Total number of “msg-summary” Subscription 6XX Responses received. Type: Counter	Int64
msgsum-subs-resp-6xxtx	Total number of “msg-summary” Subscription 6XX Responses transmitted. Type: Counter	Int64
msgsum-resubs-atrrx	Total number of “msg-summary” Refresh Subscription Attempts received. Type: Counter	Int64
msgsum-resubs-atrtx	Total number of “msg-summary” Refresh Subscription Attempts transmitted. Type: Counter	Int64
msgsum-resubs-sucrrx	Total number of “msg-summary” Refresh Subscription Successes received. Type: Counter	Int64
msgsum-resubs-sucrctx	Total number of “msg-summary” Refresh Subscription Successes transmitted. Type: Counter	Int64
msgsum-resubs-failrx	Total number of “msg-summary” Refresh Subscription Failures received. Type: Counter	Int64
msgsum-resubs-failtx	Total number of “msg-summary” Refresh Subscription Failures transmitted. Type: Counter	Int64
msgsum-resubs-resp-200rx	Total number of “msg-summary” Refresh Subscription 200 Responses received. Type: Counter	Int64
msgsum-resubs-resp-200tx	Total number of “msg-summary” Refresh Subscription 200 Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-202rx	Total number of “msg-summary” Refresh Subscription 202 Responses received. Type: Counter	Int64
msgsum-resubs-resp-202tx	Total number of “msg-summary” Refresh Subscription 202 Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-400rx	Total number of “msg-summary” Refresh Subscription 400 Responses received. Type: Counter	Int64
msgsum-resubs-resp-400tx	Total number of “msg-summary” Refresh Subscription 400 Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-403rx	Total number of “msg-summary” Refresh Subscription 403 Responses received. Type: Counter	Int64
msgsum-resubs-resp-403tx	Total number of “msg-summary” Refresh Subscription 403 Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-481rx	Total number of “msg-summary” Refresh Subscription 481 Responses received. Type: Counter	Int64

Variables	Description	Data Type
msgsum-resubs-resp-481tx	Total number of“msg-summary” Refresh Subscription 481 Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-489rx	Total number of“msg-summary” Refresh Subscription 489 Responses received. Type: Counter	Int64
msgsum-resubs-resp-489tx	Total number of“msg-summary” Refresh Subscription 489 Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-500rx	Total number of“msg-summary” Refresh Subscription 500 Responses received. Type: Counter	Int64
msgsum-resubs-resp-500tx	Total number of“msg-summary” Refresh Subscription 500 Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-3xxrx	Total number of“msg-summary” Refresh Subscription 3XX Responses received. Type: Counter	Int64
msgsum-resubs-resp-3xxtx	Total number of“msg-summary” Refresh Subscription 3XX Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-4xxrx	Total number of“msg-summary” Refresh Subscription 4XX Responses received. Type: Counter	Int64
msgsum-resubs-resp-4xxtx	Total number of“msg-summary” Refresh Subscription 4XX Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-5xxrx	Total number of“msg-summary” Refresh Subscription 5XX Responses received. Type: Counter	Int64
msgsum-resubs-resp-5xxtx	Total number of“msg-summary” Refresh Subscription 5XX Responses transmitted. Type: Counter	Int64
msgsum-resubs-resp-6xxrx	Total number of“msg-summary” Refresh Subscription 6XX Responses received. Type: Counter	Int64
msgsum-resubs-resp-6xxtx	Total number of“msg-summary” Refresh Subscription 6XX Responses transmitted. Type: Counter	Int64
msgsum-unsubs-atrx	Total number of“msg-summary” Un-Subscription Attempts received. Type: Counter	Int64
msgsum-unsubs-attx	Total number of“msg-summary” Un-Subscription Attempts transmitted. Type: Counter	Int64
msgsum-unsubs-succrx	Total number of“msg-summary” Un-Subscription Successes received. Type: Counter	Int64
msgsum-unsubs-succtx	Total number of“msg-summary” Un-Subscription Successes transmitted. Type: Counter	Int64
msgsum-unsubs-failrx	Total number of“msg-summary” Un-Subscription Failures received. Type: Counter	Int64
msgsum-unsubs-failtx	Total number of“msg-summary” Un-Subscription Failures transmitted. Type: Counter	Int64

■ Common Syntax Options

Variables	Description	Data Type
msgsum-unsubs-resp-200rx	Total number of “msg-summary” Un-Subscription 200 Responses received. Type: Counter	Int64
msgsum-unsubs-resp-200tx	Total number of “msg-summary” Un-Subscription 200 Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-202rx	Total number of “msg-summary” Un-Subscription 202 Responses received. Type: Counter	Int64
msgsum-unsubs-resp-202tx	Total number of “msg-summary” Un-Subscription 202 Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-400rx	Total number of “msg-summary” Un-Subscription 400 Responses received. Type: Counter	Int64
msgsum-unsubs-resp-400tx	Total number of “msg-summary” Un-Subscription 400 Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-403rx	Total number of “msg-summary” Un-Subscription 403 Responses received. Type: Counter	Int64
msgsum-unsubs-resp-403tx	Total number of “msg-summary” Un-Subscription 403 Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-481rx	Total number of “msg-summary” Un-Subscription 481 Responses received. Type: Counter	Int64
msgsum-unsubs-resp-481tx	Total number of “msg-summary” Un-Subscription 481 Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-489rx	Total number of “msg-summary” Un-Subscription 489 Responses received. Type: Counter	Int64
msgsum-unsubs-resp-489tx	Total number of “msg-summary” Un-Subscription 489 Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-500rx	Total number of “msg-summary” Un-Subscription 500 Responses received. Type: Counter	Int64
msgsum-unsubs-resp-500tx	Total number of “msg-summary” Un-Subscription 500 Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-3xxrx	Total number of “msg-summary” Un-Subscription 3XX Responses received. Type: Counter	Int64
msgsum-unsubs-resp-3xxtx	Total number of “msg-summary” Un-Subscription 3XX Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-4xxrx	Total number of “msg-summary” Un-Subscription 4XX Responses received. Type: Counter	Int64
msgsum-unsubs-resp-4xxtx	Total number of “msg-summary” Un-Subscription 4XX Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-5xxrx	Total number of “msg-summary” Un-Subscription 5XX Responses received. Type: Counter	Int64

Variables	Description	Data Type
msgsum-unsubs-resp-5xxtx	Total number of“msg-summary” Un-Subscription 5XX Responses transmitted. Type: Counter	Int64
msgsum-unsubs-resp-6xxrx	Total number of“msg-summary” Un-Subscription 6XX Responses received. Type: Counter	Int64
msgsum-unsubs-resp-6xxtx	Total number of“msg-summary” Un-Subscription 6XX Responses transmitted. Type: Counter	Int64
msgsum-notify-atrrx	Total number of“msg-summary” Notify Attempts received. Type: Counter	Int64
msgsum-notify-atrtx	Total number of“msg-summary” Notify Attempts transmitted. Type: Counter	Int64
msgsum-notify-succrx	Total number of“msg-summary” Notify Successes received. Type: Counter	Int64
msgsum-notify-succtx	Total number of“msg-summary” Notify Successes transmitted. Type: Counter	Int64
msgsum-notify-failrx	Total number of“msg-summary” Notify Failures received. Type: Counter	Int64
msgsum-notify-failtx	Total number of“msg-summary” Notify Failures transmitted. Type: Counter	Int64
msgsum-notify-resp-3xxrx	Total number of“msg-summary” Notify 3XX Responses received. Type: Counter	Int64
msgsum-notify-resp-3xxtx	Total number of“msg-summary” Notify 3XX Responses transmitted. Type: Counter	Int64
msgsum-notify-resp-400rx	Total number of“msg-summary” Notify 400 Responses received. Type: Counter	Int64
msgsum-notify-resp-400tx	Total number of“msg-summary” Notify 400 Responses transmitted. Type: Counter	Int64
msgsum-notify-resp-481 rx	Total number of“msg-summary” Notify 481 Responses received. Type: Counter	Int64
msgsum-notify-resp-481 tx	Total number of“msg-summary” Notify 481 Responses transmitted. Type: Counter	Int64
msgsum-notify-resp-489rx	Total number of“msg-summary” Notify 489 Responses received. Type: Counter	Int64
msgsum-notify-resp-489tx	Total number of“msg-summary” Notify 489 Responses transmitted. Type: Counter	Int64
msgsum-notify-resp-4xxrx	Total number of“msg-summary” Notify 4XX Responses received. Type: Counter	Int64
msgsum-notify-resp-4xxtx	Total number of“msg-summary” Notify 4XX Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
msgsum-notify-resp-500rx	Total number of “msg-summary” Notify 500 Responses received. Type: Counter	Int64
msgsum-notify-resp-500tx	Total number of “msg-summary” Notify 500 Responses transmitted. Type: Counter	Int64
msgsum-notify-resp-5xxrx	Total number of “msg-summary” Notify 5XX Responses received. Type: Counter	Int64
msgsum-notify-resp-5xxtx	Total number of “msg-summary” Notify 5XX Responses transmitted. Type: Counter	Int64
msgsum-notify-resp-6xxrx	Total number of “msg-summary” Notify 6XX Responses received. Type: Counter	Int64
msgsum-notify-resp-6xxtx	Total number of “msg-summary” Notify 6XX Responses transmitted. Type: Counter	Int64
msgsum-pub-atrrx	Total number of “msg-summary” Publish Attempts received. Type: Counter	Int64
msgsum-pub-atrtx	Total number of “msg-summary” Publish Attempts transmitted. Type: Counter	Int64
msgsum-pub-succrx	Total number of “msg-summary” Publish Successes received. Type: Counter	Int64
msgsum-pub-succtx	Total number of “msg-summary” Publish Successes transmitted. Type: Counter	Int64
msgsum-pub-failrx	Total number of “msg-summary” Publish Failures received. Type: Counter	Int64
msgsum-pub-failtx	Total number of “msg-summary” Publish Failures transmitted. Type: Counter	Int64
msgsum-pub-resp-3xxrx	Total number of “msg-summary” Publish 3XX Responses received. Type: Counter	Int64
msgsum-pub-resp-3xxtx	Total number of “msg-summary” Publish 3XX Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-400rx	Total number of “msg-summary” Publish 400 Responses received. Type: Counter	Int64
msgsum-pub-resp-400tx	Total number of “msg-summary” Publish 400 Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-404rx	Total number of “msg-summary” Publish 404 Responses received. Type: Counter	Int64
msgsum-pub-resp-404tx	Total number of “msg-summary” Publish 404 Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-412rx	Total number of “msg-summary” Publish 412 Responses received. Type: Counter	Int64

Variables	Description	Data Type
msgsum-pub-resp-412tx	Total number of“msg-summary” Publish 412 Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-423rx	Total number of“msg-summary” Publish 423 Responses received. Type: Counter	Int64
msgsum-pub-resp-423tx	Total number of“msg-summary” Publish 423 Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-489rx	Total number of“msg-summary” Publish 489 Responses received. Type: Counter	Int64
msgsum-pub-resp-489tx	Total number of“msg-summary” Publish 489 Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-4xxrx	Total number of“msg-summary” Publish 4XX Responses received. Type: Counter	Int64
msgsum-pub-resp-4xxtx	Total number of“msg-summary” Publish 4XX Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-500rx	Total number of“msg-summary” Publish 500 Responses received. Type: Counter	Int64
msgsum-pub-resp-500tx	Total number of“msg-summary” Publish 500 Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-503rx	Total number of“msg-summary” Publish 503 Responses received. Type: Counter	Int64
msgsum-pub-resp-503tx	Total number of“msg-summary” Publish 503 Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-5xxrx	Total number of“msg-summary” Publish 5XX Responses received. Type: Counter	Int64
msgsum-pub-resp-5xxtx	Total number of“msg-summary” Publish 5XX Responses transmitted. Type: Counter	Int64
msgsum-pub-resp-6xxrx	Total number of“msg-summary” Publish 6XX Responses received. Type: Counter	Int64
msgsum-pub-resp-6xxtx	Total number of“msg-summary” Publish 6XX Responses transmitted. Type: Counter	Int64
msgsum-unpub-attrx	Total number of“msg-summary” Un-Publish Attempts received. Type: Counter	Int64
msgsum-unpub-atttx	Total number of“msg-summary” Un-Publish Attempts transmitted. Type: Counter	Int64
msgsum-unpub-succrx	Total number of“msg-summary” Un-Publish Successes received. Type: Counter	Int64
msgsum-unpub-succtx	Total number of“msg-summary” Un-Publish Successes transmitted. Type: Counter	Int64

Variables	Description	Data Type
msgsum-unpub-failrx	Total number of “msg-summary” Un-Publish Failures received. Type: Counter	Int64
msgsum-unpub-failtx	Total number of “msg-summary” Un-Publish Failures transmitted. Type: Counter	Int64
msgsum-unpub-resp-3xxrx	Total number of “msg-summary” Un-Publish 3XX Responses received. Type: Counter	Int64
msgsum-unpub-resp-3xxtx	Total number of “msg-summary” Un-Publish 3XX Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-400rx	Total number of “msg-summary” Un-Publish 400 Responses received. Type: Counter	Int64
msgsum-unpub-resp-400tx	Total number of “msg-summary” Un-Publish 400 Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-404rx	Total number of “msg-summary” Un-Publish 404 Responses received. Type: Counter	Int64
msgsum-unpub-resp-404tx	Total number of “msg-summary” Un-Publish 404 Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-412rx	Total number of “msg-summary” Un-Publish 412 Responses received. Type: Counter	Int64
msgsum-unpub-resp-412tx	Total number of “msg-summary” Un-Publish 412 Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-423rx	Total number of “msg-summary” Un-Publish 423 Responses received. Type: Counter	Int64
msgsum-unpub-resp-423tx	Total number of “msg-summary” Un-Publish 423 Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-489rx	Total number of “msg-summary” Un-Publish 489 Responses received. Type: Counter	Int64
msgsum-unpub-resp-489tx	Total number of “msg-summary” Un-Publish 489 Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-4xxrx	Total number of “msg-summary” Un-Publish 4XX Responses received. Type: Counter	Int64
msgsum-unpub-resp-4xxtx	Total number of “msg-summary” Un-Publish 4XX Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-500rx	Total number of “msg-summary” Un-Publish 500 Responses received. Type: Counter	Int64
msgsum-unpub-resp-500tx	Total number of “msg-summary” Un-Publish 500 Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-503rx	Total number of “msg-summary” Un-Publish 503 Responses received. Type: Counter	Int64

Variables	Description	Data Type
msgsum-unpub-resp-503tx	Total number of “msg-summary” Un-Publish 503 Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-5xxrx	Total number of “msg-summary” Un-Publish 5XX Responses received. Type: Counter	Int64
msgsum-unpub-resp-5xxtx	Total number of “msg-summary” Un-Publish 5XX Responses transmitted. Type: Counter	Int64
msgsum-unpub-resp-6xxrx	Total number of “msg-summary” Un-Publish 6XX Responses received. Type: Counter	Int64
msgsum-unpub-resp-6xxtx	Total number of “msg-summary” Un-Publish 6XX Responses transmitted. Type: Counter	Int64
pres-subs-attrx	Total number of “presence” Subscription Attempts received. Type: Counter	Int64
pres-subs-atttx	Total number of “presence” Subscription Attempts transmitted. Type: Counter	Int64
pres-subs-succrx	Total number of “presence” Subscription Successes received. Type: Counter	Int64
pres-subs-succtx	Total number of “presence” Subscription Successes transmitted. Type: Counter	Int64
pres-subs-failrx	Total number of “presence” Subscription Failures received. Type: Counter	Int64
pres-subs-failtx	Total number of “presence” Subscription Failures transmitted. Type: Counter	Int64
pres-subs-resp-200rx	Total number of “presence” Subscription 200 Responses received. Type: Counter	Int64
pres-subs-resp-200tx	Total number of “presence” Subscription 200 Responses transmitted. Type: Counter	Int64
pres-subs-resp-202rx	Total number of “presence” Subscription 202 Responses received. Type: Counter	Int64
pres-subs-resp-202tx	Total number of “presence” Subscription 202 Responses transmitted. Type: Counter	Int64
pres-subs-resp-400rx	Total number of “presence” Subscription 400 Responses received. Type: Counter	Int64
pres-subs-resp-400tx	Total number of “presence” Subscription 400 Responses transmitted. Type: Counter	Int64
pres-subs-resp-403rx	Total number of “presence” Subscription 403 Responses received. Type: Counter	Int64
pres-subs-resp-403tx	Total number of “presence” Subscription 403 Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
pres-subs-resp-481rx	Total number of “presence” Subscription 481 Responses received. Type: Counter	Int64
pres-subs-resp-481tx	Total number of “presence” Subscription 481 Responses transmitted. Type: Counter	Int64
pres-subs-resp-489rx	Total number of “presence” Subscription 489 Responses received. Type: Counter	Int64
pres-subs-resp-489tx	Total number of “presence” Subscription 489 Responses transmitted. Type: Counter	Int64
pres-subs-resp-500rx	Total number of “presence” Subscription 500 Responses received. Type: Counter	Int64
pres-subs-resp-500tx	Total number of “presence” Subscription 500 Responses transmitted. Type: Counter	Int64
pres-subs-resp-3xxrx	Total number of “presence” Subscription 3XX Responses received. Type: Counter	Int64
pres-subs-resp-3xxtx	Total number of “presence” Subscription 3XX Responses transmitted. Type: Counter	Int64
pres-subs-resp-4xxrx	Total number of “presence” Subscription 4XX Responses received. Type: Counter	Int64
pres-subs-resp-4xxtx	Total number of “presence” Subscription 4XX Responses transmitted. Type: Counter	Int64
pres-subs-resp-5xxrx	Total number of “presence” Subscription 5XX Responses received. Type: Counter	Int64
pres-subs-resp-5xxtx	Total number of “presence” Subscription 5XX Responses transmitted. Type: Counter	Int64
pres-subs-resp-6xxrx	Total number of “presence” Subscription 6XX Responses received. Type: Counter	Int64
pres-subs-resp-6xxtx	Total number of “presence” Subscription 6XX Responses transmitted. Type: Counter	Int64
pres-resubs-attrx	Total number of “presence” Refresh Subscription Attempts received. Type: Counter	Int64
pres-resubs-atttx	Total number of “presence” Refresh Subscription Attempts transmitted. Type: Counter	Int64
pres-resubs-succrx	Total number of “presence” Refresh Subscription Successes received. Type: Counter	Int64
pres-resubs-succtx	Total number of “presence” Refresh Subscription Successes transmitted. Type: Counter	Int64
pres-resubs-failrx	Total number of “presence” Refresh Subscription Failures received. Type: Counter	Int64

Variables	Description	Data Type
pres-resubs-failtx	Total number of “presence” Refresh Subscription Failures transmitted. Type: Counter	Int64
pres-resubs-resp-200rx	Total number of “presence” Refresh Subscription 200 Responses received. Type: Counter	Int64
pres-resubs-resp-200tx	Total number of “presence” Refresh Subscription 200 Responses transmitted. Type: Counter	Int64
pres-resubs-resp-202rx	Total number of “presence” Refresh Subscription 202 Responses received. Type: Counter	Int64
pres-resubs-resp-202tx	Total number of “presence” Refresh Subscription 202 Responses transmitted. Type: Counter	Int64
pres-resubs-resp-400rx	Total number of “presence” Refresh Subscription 400 Responses received. Type: Counter	Int64
pres-resubs-resp-400tx	Total number of “presence” Refresh Subscription 400 Responses transmitted. Type: Counter	Int64
pres-resubs-resp-403rx	Total number of “presence” Refresh Subscription 403 Responses received. Type: Counter	Int64
pres-resubs-resp-403tx	Total number of “presence” Refresh Subscription 403 Responses transmitted. Type: Counter	Int64
pres-resubs-resp-481rx	Total number of “presence” Refresh Subscription 481 Responses received. Type: Counter	Int64
pres-resubs-resp-481tx	Total number of “presence” Refresh Subscription 481 Responses transmitted. Type: Counter	Int64
pres-resubs-resp-489rx	Total number of “presence” Refresh Subscription 489 Responses received. Type: Counter	Int64
pres-resubs-resp-489tx	Total number of “presence” Refresh Subscription 489 Responses transmitted. Type: Counter	Int64
pres-resubs-resp-500rx	Total number of “presence” Refresh Subscription 500 Responses received. Type: Counter	Int64
pres-resubs-resp-500tx	Total number of “presence” Refresh Subscription 500 Responses transmitted. Type: Counter	Int64
pres-resubs-resp-3xxrx	Total number of “presence” Refresh Subscription 3XX Responses received. Type: Counter	Int64
pres-resubs-resp-3xxtx	Total number of “presence” Refresh Subscription 3XX Responses transmitted. Type: Counter	Int64
pres-resubs-resp-4xxrx	Total number of “presence” Refresh Subscription 4XX Responses received. Type: Counter	Int64
pres-resubs-resp-4xxtx	Total number of “presence” Refresh Subscription 4XX Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
pres-resubs-resp-5xxrx	Total number of “presence” Refresh Subscription 5XX Responses received. Type: Counter	Int64
pres-resubs-resp-5xxtx	Total number of “presence” Refresh Subscription 5XX Responses transmitted. Type: Counter	Int64
pres-resubs-resp-6xxrx	Total number of “presence” Refresh Subscription 6XX Responses received. Type: Counter	Int64
pres-resubs-resp-6xxtx	Total number of “presence” Refresh Subscription 6XX Responses transmitted. Type: Counter	Int64
pres-unsubs-atrx	Total number of “presence” Un-Subscription Attempts received. Type: Counter	Int64
pres-unsubs-attx	Total number of “presence” Un-Subscription Attempts transmitted. Type: Counter	Int64
pres-unsubs-sucrx	Total number of “presence” Un-Subscription Successes received. Type: Counter	Int64
pres-unsubs-succtx	Total number of “presence” Un-Subscription Successes transmitted. Type: Counter	Int64
pres-unsubs-failrx	Total number of “presence” Un-Subscription Failures received. Type: Counter	Int64
pres-unsubs-failtx	Total number of “presence” Un-Subscription Failures transmitted. Type: Counter	Int64
pres-unsubs-resp-200rx	Total number of “presence” Un-Subscription 200 Responses received. Type: Counter	Int64
pres-unsubs-resp-200tx	Total number of “presence” Un-Subscription 200 Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-202rx	Total number of “presence” Un-Subscription 202 Responses received. Type: Counter	Int64
pres-unsubs-resp-202tx	Total number of “presence” Un-Subscription 202 Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-400rx	Total number of “presence” Un-Subscription 400 Responses received. Type: Counter	Int64
pres-unsubs-resp-400tx	Total number of “presence” Un-Subscription 400 Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-403rx	Total number of “presence” Un-Subscription 403 Responses received. Type: Counter	Int64
pres-unsubs-resp-403tx	Total number of “presence” Un-Subscription 403 Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-481rx	Total number of “presence” Un-Subscription 481 Responses received. Type: Counter	Int64

Variables	Description	Data Type
pres-unsubs-resp-481tx	Total number of “presence” Un-Subscription 481 Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-489rx	Total number of “presence” Un-Subscription 489 Responses received. Type: Counter	Int64
pres-unsubs-resp-489tx	Total number of “presence” Un-Subscription 489 Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-500rx	Total number of “presence” Un-Subscription 500 Responses received. Type: Counter	Int64
pres-unsubs-resp-500tx	Total number of “presence” Un-Subscription 500 Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-3xxrx	Total number of “presence” Un-Subscription 3XX Responses received. Type: Counter	Int64
pres-unsubs-resp-3xxtx	Total number of “presence” Un-Subscription 3XX Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-4xxrx	Total number of “presence” Un-Subscription 4XX Responses received. Type: Counter	Int64
pres-unsubs-resp-4xxtx	Total number of “presence” Un-Subscription 4XX Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-5xxrx	Total number of “presence” Un-Subscription 5XX Responses received. Type: Counter	Int64
pres-unsubs-resp-5xxtx	Total number of “presence” Un-Subscription 5XX Responses transmitted. Type: Counter	Int64
pres-unsubs-resp-6xxrx	Total number of “presence” Un-Subscription 6XX Responses received. Type: Counter	Int64
pres-unsubs-resp-6xxtx	Total number of “presence” Un-Subscription 6XX Responses transmitted. Type: Counter	Int64
pres-notify-atrx	Total number of “presence” Notify Attempts received. Type: Counter	Int64
pres-notify-atttx	Total number of “presence” Notify Attempts transmitted. Type: Counter	Int64
pres-notify-succrx	Total number of “presence” Notify Successes received. Type: Counter	Int64
pres-notify-succtx	Total number of “presence” Notify Successes transmitted. Type: Counter	Int64
pres-notify-failrx	Total number of “presence” Notify Failures received. Type: Counter	Int64
pres-notify-failtx	Total number of “presence” Notify Failures transmitted. Type: Counter	Int64

Variables	Description	Data Type
pres-notify-resp-3xxrx	Total number of “presence” Notify 3XX Responses received. Type: Counter	Int64
pres-notify-resp-3xxtx	Total number of “presence” Notify 3XX Responses transmitted. Type: Counter	Int64
pres-notify-resp-400rx	Total number of “presence” Notify 400 Responses received. Type: Counter	Int64
pres-notify-resp-400tx	Total number of “presence” Notify 400 Responses transmitted. Type: Counter	Int64
pres-notify-resp-481rx	Total number of “presence” Notify 481 Responses received. Type: Counter	Int64
pres-notify-resp-481tx	Total number of “presence” Notify 481 Responses transmitted. Type: Counter	Int64
pres-notify-resp-489rx	Total number of “presence” Notify 489 Responses received. Type: Counter	Int64
pres-notify-resp-489tx	Total number of “presence” Notify 489 Responses transmitted. Type: Counter	Int64
pres-notify-resp-4xxrx	Total number of “presence” Notify 4XX Responses received. Type: Counter	Int64
pres-notify-resp-4xxtx	Total number of “presence” Notify 4XX Responses transmitted. Type: Counter	Int64
pres-notify-resp-500rx	Total number of “presence” Notify 500 Responses received. Type: Counter	Int64
pres-notify-resp-500tx	Total number of “presence” Notify 500 Responses transmitted. Type: Counter	Int64
pres-notify-resp-5xxrx	Total number of “presence” Notify 5XX Responses received. Type: Counter	Int64
pres-notify-resp-5xxtx	Total number of “presence” Notify 5XX Responses transmitted. Type: Counter	Int64
pres-notify-resp-6xxrx	Total number of “presence” Notify 6XX Responses received. Type: Counter	Int64
pres-notify-resp-6xxtx	Total number of “presence” Notify 6XX Responses transmitted. Type: Counter	Int64
pres-pub-atrrx	Total number of “presence” Publish Attempts received. Type: Counter	Int64
pres-pub-atttx	Total number of “presence” Publish Attempts transmitted. Type: Counter	Int64
pres-pub-succrx	Total number of “presence” Publish Successes received. Type: Counter	Int64

Variables	Description	Data Type
pres-pub-succtx	Total number of “presence” Publish Successes transmitted. Type: Counter	Int64
pres-pub-failrx	Total number of “presence” Publish Failures received. Type: Counter	Int64
pres-pub-failtx	Total number of “presence” Publish Failures transmitted. Type: Counter	Int64
pres-pub-resp-3xxrx	Total number of “presence” Publish 3XX Responses received. Type: Counter	Int64
pres-pub-resp-3xxtx	Total number of “presence” Publish 3XX Responses transmitted. Type: Counter	Int64
pres-pub-resp-400rx	Total number of “presence” Publish 400 Responses received. Type: Counter	Int64
pres-pub-resp-400tx	Total number of “presence” Publish 400 Responses transmitted. Type: Counter	Int64
pres-pub-resp-404rx	Total number of “presence” Publish 404 Responses received. Type: Counter	Int64
pres-pub-resp-404tx	Total number of “presence” Publish 404 Responses transmitted. Type: Counter	Int64
pres-pub-resp-412rx	Total number of “presence” Publish 412 Responses received. Type: Counter	Int64
pres-pub-resp-412tx	Total number of “presence” Publish 412 Responses transmitted. Type: Counter	Int64
pres-pub-resp-423rx	Total number of “presence” Publish 423 Responses received. Type: Counter	Int64
pres-pub-resp-423tx	Total number of “presence” Publish 423 Responses transmitted. Type: Counter	Int64
pres-pub-resp-489rx	Total number of “presence” Publish 489 Responses received. Type: Counter	Int64
pres-pub-resp-489tx	Total number of “presence” Publish 489 Responses transmitted. Type: Counter	Int64
pres-pub-resp-4xxrx	Total number of “presence” Publish 4XX Responses received. Type: Counter	Int64
pres-pub-resp-4xxtx	Total number of “presence” Publish 4XX Responses transmitted. Type: Counter	Int64
pres-pub-resp-500rx	Total number of “presence” Publish 500 Responses received. Type: Counter	Int64
pres-pub-resp-500tx	Total number of “presence” Publish 500 Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
pres-pub-resp-503rx	Total number of “presence” Publish 503 Responses received. Type: Counter	Int64
pres-pub-resp-503tx	Total number of “presence” Publish 503 Responses transmitted. Type: Counter	Int64
pres-pub-resp-5xxrx	Total number of “presence” Publish 5XX Responses received. Type: Counter	Int64
pres-pub-resp-5xxtx	Total number of “presence” Publish 5XX Responses transmitted. Type: Counter	Int64
pres-pub-resp-6xxrx	Total number of “presence” Publish 6XX Responses received. Type: Counter	Int64
pres-pub-resp-6xxtx	Total number of “presence” Publish 6XX Responses transmitted. Type: Counter	Int64
pres-unpub-atrrx	Total number of “presence” Un-Publish Attempts received. Type: Counter	Int64
pres-unpub-atttx	Total number of “presence” Un-Publish Attempts transmitted. Type: Counter	Int64
pres-unpub-succrx	Total number of “presence” Un-Publish Successes received. Type: Counter	Int64
pres-unpub-succtx	Total number of “presence” Un-Publish Successes transmitted. Type: Counter	Int64
pres-unpub-failrx	Total number of “presence” Un-Publish Failures received. Type: Counter	Int64
pres-unpub-failtx	Total number of “presence” Un-Publish Failures transmitted. Type: Counter	Int64
pres-unpub-resp-3xxrx	Total number of “presence” Un-Publish 3XX Responses received. Type: Counter	Int64
pres-unpub-resp-3xxtx	Total number of “presence” Un-Publish 3XX Responses transmitted. Type: Counter	Int64
pres-unpub-resp-400rx	Total number of “presence” Un-Publish 400 Responses received. Type: Counter	Int64
pres-unpub-resp-400tx	Total number of “presence” Un-Publish 400 Responses transmitted. Type: Counter	Int64
pres-unpub-resp-404rx	Total number of “presence” Un-Publish 404 Responses received. Type: Counter	Int64
pres-unpub-resp-404tx	Total number of “presence” Un-Publish 404 Responses transmitted. Type: Counter	Int64
pres-unpub-resp-412rx	Total number of “presence” Un-Publish 412 Responses received. Type: Counter	Int64

Variables	Description	Data Type
pres-unpub-resp-412tx	Total number of “presence” Un-Publish 412 Responses transmitted. Type: Counter	Int64
pres-unpub-resp-423rx	Total number of “presence” Un-Publish 423 Responses received. Type: Counter	Int64
pres-unpub-resp-423tx	Total number of “presence” Un-Publish 423 Responses transmitted. Type: Counter	Int64
pres-unpub-resp-489rx	Total number of “presence” Un-Publish 489 Responses received. Type: Counter	Int64
pres-unpub-resp-489tx	Total number of “presence” Un-Publish 489 Responses transmitted. Type: Counter	Int64
pres-unpub-resp-4xxrx	Total number of “presence” Un-Publish 4XX Responses received. Type: Counter	Int64
pres-unpub-resp-4xxtx	Total number of “presence” Un-Publish 4XX Responses transmitted. Type: Counter	Int64
pres-unpub-resp-500rx	Total number of “presence” Un-Publish 500 Responses received. Type: Counter	Int64
pres-unpub-resp-500tx	Total number of “presence” Un-Publish 500 Responses transmitted. Type: Counter	Int64
pres-unpub-resp-503rx	Total number of “presence” Un-Publish 503 Responses received. Type: Counter	Int64
pres-unpub-resp-503tx	Total number of “presence” Un-Publish 503 Responses transmitted. Type: Counter	Int64
pres-unpub-resp-5xxrx	Total number of “presence” Un-Publish 5XX Responses received. Type: Counter	Int64
pres-unpub-resp-5xxtx	Total number of “presence” Un-Publish 5XX Responses transmitted. Type: Counter	Int64
pres-unpub-resp-6xxrx	Total number of “presence” Un-Publish 6XX Responses received. Type: Counter	Int64
pres-unpub-resp-6xxtx	Total number of “presence” Un-Publish 6XX Responses transmitted. Type: Counter	Int64
reg-subs-atrrx	Total number of “reg” Subscription Attempts received. Type: Counter	Int64
reg-subs-atttx	Total number of “reg” Subscription Attempts transmitted. Type: Counter	Int64
reg-subs-succrx	Total number of “reg” Subscription Successes received. Type: Counter	Int64
reg-subs-succtx	Total number of “reg” Subscription Successes transmitted. Type: Counter	Int64

Variables	Description	Data Type
reg-subs-failrx	Total number of “reg” Subscription Failures received. Type: Counter	Int64
reg-subs-failtx	Total number of “reg” Subscription Failures transmitted. Type: Counter	Int64
reg-subs-resp-200rx	Total number of “reg” Subscription 200 Responses received. Type: Counter	Int64
reg-subs-resp-200tx	Total number of “reg” Subscription 200 Responses transmitted. Type: Counter	Int64
reg-subs-resp-202rx	Total number of “reg” Subscription 202 Responses received. Type: Counter	Int64
reg-subs-resp-202tx	Total number of “reg” Subscription 202 Responses transmitted. Type: Counter	Int64
reg-subs-resp-400rx	Total number of “reg” Subscription 400 Responses received. Type: Counter	Int64
reg-subs-resp-400tx	Total number of “reg” Subscription 400 Responses transmitted. Type: Counter	Int64
reg-subs-resp-403rx	Total number of “reg” Subscription 403 Responses received. Type: Counter	Int64
reg-subs-resp-403tx	Total number of “reg” Subscription 403 Responses transmitted. Type: Counter	Int64
reg-subs-resp-481rx	Total number of “reg” Subscription 481 Responses received. Type: Counter	Int64
reg-subs-resp-481tx	Total number of “reg” Subscription 481 Responses transmitted. Type: Counter	Int64
reg-subs-resp-489rx	Total number of “reg” Subscription 489 Responses received. Type: Counter	Int64
reg-subs-resp-489tx	Total number of “reg” Subscription 489 Responses transmitted. Type: Counter	Int64
reg-subs-resp-500rx	Total number of “reg” Subscription 500 Responses received. Type: Counter	Int64
reg-subs-resp-500tx	Total number of “reg” Subscription 500 Responses transmitted. Type: Counter	Int64
reg-subs-resp-3xxrx	Total number of “reg” Subscription 3XX Responses received. Type: Counter	Int64
reg-subs-resp-3xxtx	Total number of “reg” Subscription 3XX Responses transmitted. Type: Counter	Int64
reg-subs-resp-4xxrx	Total number of “reg” Subscription 4XX Responses received. Type: Counter	Int64

Variables	Description	Data Type
reg-subsp-4xxrx	Total number of“reg” Subscription 4XX Responses transmitted. Type: Counter	Int64
reg-subsp-5xxrx	Total number of“reg” Subscription 5XX Responses received. Type: Counter	Int64
reg-subsp-5xxrx	Total number of“reg” Subscription 5XX Responses transmitted. Type: Counter	Int64
reg-subsp-6xxrx	Total number of“reg” Subscription 6XX Responses received. Type: Counter	Int64
reg-subsp-6xxrx	Total number of“reg” Subscription 6XX Responses transmitted. Type: Counter	Int64
reg-resubsp-atrrx	Total number of“reg” Refresh Subscription Attempts received. Type: Counter	Int64
reg-resubsp-atrrx	Total number of“reg” Refresh Subscription Attempts transmitted. Type: Counter	Int64
reg-resubsp-succrx	Total number of“reg” Refresh Subscription Successes received. Type: Counter	Int64
reg-resubsp-succrx	Total number of“reg” Refresh Subscription Successes transmitted. Type: Counter	Int64
reg-resubsp-failrx	Total number of“reg” Refresh Subscription Failures received. Type: Counter	Int64
reg-resubsp-failrx	Total number of“reg” Refresh Subscription Failures transmitted. Type: Counter	Int64
reg-resubsp-200rx	Total number of“reg” Refresh Subscription 200 Responses received. Type: Counter	Int64
reg-resubsp-200rx	Total number of“reg” Refresh Subscription 200 Responses transmitted. Type: Counter	Int64
reg-resubsp-202rx	Total number of“reg” Refresh Subscription 202 Responses received. Type: Counter	Int64
reg-resubsp-202rx	Total number of“reg” Refresh Subscription 202 Responses transmitted. Type: Counter	Int64
reg-resubsp-400rx	Total number of“reg” Refresh Subscription 400 Responses received. Type: Counter	Int64
reg-resubsp-400rx	Total number of“reg” Refresh Subscription 400 Responses transmitted. Type: Counter	Int64
reg-resubsp-403rx	Total number of“reg” Refresh Subscription 403 Responses received. Type: Counter	Int64
reg-resubsp-403rx	Total number of“reg” Refresh Subscription 403 Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
reg-resubs-resp-481rx	Total number of “reg” Refresh Subscription 481 Responses received. Type: Counter	Int64
reg-resubs-resp-481tx	Total number of “reg” Refresh Subscription 481 Responses transmitted. Type: Counter	Int64
reg-resubs-resp-489rx	Total number of “reg” Refresh Subscription 489 Responses received. Type: Counter	Int64
reg-resubs-resp-489tx	Total number of “reg” Refresh Subscription 489 Responses transmitted. Type: Counter	Int64
reg-resubs-resp-500rx	Total number of “reg” Refresh Subscription 500 Responses received. Type: Counter	Int64
reg-resubs-resp-500tx	Total number of “reg” Refresh Subscription 500 Responses transmitted. Type: Counter	Int64
reg-resubs-resp-3xxrx	Total number of “reg” Refresh Subscription 3XX Responses received. Type: Counter	Int64
reg-resubs-resp-3xxtx	Total number of “reg” Refresh Subscription 3XX Responses transmitted. Type: Counter	Int64
reg-resubs-resp-4xxrx	Total number of “reg” Refresh Subscription 4XX Responses received. Type: Counter	Int64
reg-resubs-resp-4xxtx	Total number of “reg” Refresh Subscription 4XX Responses transmitted. Type: Counter	Int64
reg-resubs-resp-5xxrx	Total number of “reg” Refresh Subscription 5XX Responses received. Type: Counter	Int64
reg-resubs-resp-5xxtx	Total number of “reg” Refresh Subscription 5XX Responses transmitted. Type: Counter	Int64
reg-resubs-resp-6xxrx	Total number of “reg” Refresh Subscription 6XX Responses received. Type: Counter	Int64
reg-resubs-resp-6xxtx	Total number of “reg” Refresh Subscription 6XX Responses transmitted. Type: Counter	Int64
reg-unsubs-atrx	Total number of “reg” Un-Subscription Attempts received. Type: Counter	Int64
reg-unsubs-atttx	Total number of “reg” Un-Subscription Attempts transmitted. Type: Counter	Int64
reg-unsubs-succrx	Total number of “reg” Un-Subscription Successes received. Type: Counter	Int64
reg-unsubs-succtx	Total number of “reg” Un-Subscription Successes transmitted. Type: Counter	Int64
reg-unsubs-failrx	Total number of “reg” Un-Subscription Failures received. Type: Counter	Int64

Variables	Description	Data Type
reg-unsubs-failtx	Total number of“reg” Un-Subscription Failures transmitted. Type: Counter	Int64
reg-unsubs-resp-200rx	Total number of“reg” Un-Subscription 200 Responses received. Type: Counter	Int64
reg-unsubs-resp-200tx	Total number of“reg” Un-Subscription 200 Responses transmitted. Type: Counter	Int64
reg-unsubs-resp-202rx	Total number of“reg” Un-Subscription 202 Responses received. Type: Counter	Int64
reg-unsubs-resp-202tx	Total number of“reg” Un-Subscription 202 Responses transmitted. Type: Counter	Int64
reg-unsubs-resp-400rx	Total number of“reg” Un-Subscription 400 Responses received. Type: Counter	Int64
reg-unsubs-resp-400tx	Total number of“reg” Un-Subscription 400 Responses transmitted. Type: Counter	Int64
reg-unsubs-resp-403rx	Total number of“reg” Un-Subscription 403 Responses received. Type: Counter	Int64
reg-unsubs-resp-403tx	Total number of“reg” Un-Subscription 403 Responses transmitted. Type: Counter	Int64
reg-unsubs-resp-481rx	Total number of“reg” Un-Subscription 481 Responses received. Type: Counter	Int64
reg-unsubs-resp-481tx	Total number of“reg” Un-Subscription 481 Responses transmitted. Type: Counter	Int64
reg-unsubs-resp-489rx	Total number of“reg” Un-Subscription 489 Responses received. Type: Counter	Int64
reg-unsubs-resp-489tx	Total number of“reg” Un-Subscription 489 Responses transmitted. Type: Counter	Int64
reg-unsubs-resp-500rx	Total number of“reg” Un-Subscription 500 Responses received. Type: Counter	Int64
reg-unsubs-resp-500tx	Total number of“reg” Un-Subscription 500 Responses transmitted. Type: Counter	Int64
reg-unsubs-resp-3xxrx	Total number of“reg” Un-Subscription 3XX Responses received. Type: Counter	Int64
reg-unsubs-resp-3xxtx	Total number of“reg” Un-Subscription 3XX Responses transmitted. Type: Counter	Int64
reg-unsubs-resp-4xxrx	Total number of“reg” Un-Subscription 4XX Responses received. Type: Counter	Int64
reg-unsubs-resp-4xxtx	Total number of“reg” Un-Subscription 4XX Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
reg-unsubs-resp-5xxrx	Total number of “reg” Un-Subscription 5XX Responses received. Type: Counter	Int64
reg-unsubs-resp-5xxtx	Total number of “reg” Un-Subscription 5XX Responses transmitted. Type: Counter	Int64
reg-unsubs-resp-6xxrx	Total number of “reg” Un-Subscription 6XX Responses received. Type: Counter	Int64
reg-unsubs-resp-6xxtx	Total number of “reg” Un-Subscription 6XX Responses transmitted. Type: Counter	Int64
reg-notify-attrx	Total number of “reg” Notify Attempts received. Type: Counter	Int64
reg-notify-atttx	Total number of “reg” Notify Attempts transmitted. Type: Counter	Int64
reg-notify-succrx	Total number of “reg” Notify Successes received. Type: Counter	Int64
reg-notify-succtx	Total number of “reg” Notify Successes transmitted. Type: Counter	Int64
reg-notify-failrx	Total number of “reg” Notify Failures received. Type: Counter	Int64
reg-notify-failtx	Total number of “reg” Notify Failures transmitted. Type: Counter	Int64
reg-notify-resp-3xxrx	Total number of “reg” Notify 3XX Responses received. Type: Counter	Int64
reg-notify-resp-3xxtx	Total number of “reg” Notify 3XX Responses transmitted. Type: Counter	Int64
reg-notify-resp-400rx	Total number of “reg” Notify 400 Responses received. Type: Counter	Int64
reg-notify-resp-400tx	Total number of “reg” Notify 400 Responses transmitted. Type: Counter	Int64
reg-notify-resp-481rx	Total number of “reg” Notify 481 Responses received. Type: Counter	Int64
reg-notify-resp-481tx	Total number of “reg” Notify 481 Responses transmitted. Type: Counter	Int64
reg-notify-resp-489rx	Total number of “reg” Notify 489 Responses received. Type: Counter	Int64
reg-notify-resp-489tx	Total number of “reg” Notify 489 Responses transmitted. Type: Counter	Int64
reg-notify-resp-4xxrx	Total number of “reg” Notify 4XX Responses received. Type: Counter	Int64

Variables	Description	Data Type
reg-notify-resp-4xxtx	Total number of“reg” Notify 4XX Responses transmitted. Type: Counter	Int64
reg-notify-resp-500rx	Total number of“reg” Notify 500 Responses received. Type: Counter	Int64
reg-notify-resp-500tx	Total number of“reg” Notify 500 Responses transmitted. Type: Counter	Int64
reg-notify-resp-5xxrx	Total number of“reg” Notify 5XX Responses received. Type: Counter	Int64
reg-notify-resp-5xxtx	Total number of“reg” Notify 5XX Responses transmitted. Type: Counter	Int64
reg-notify-resp-6xxrx	Total number of“reg” Notify 6XX Responses received. Type: Counter	Int64
reg-notify-resp-6xxtx	Total number of“reg” Notify 6XX Responses transmitted. Type: Counter	Int64
reg-pub-atrrx	Total number of“reg” Publish Attempts received. Type: Counter	Int64
reg-pub-atttx	Total number of“reg” Publish Attempts transmitted. Type: Counter	Int64
reg-pub-succrx	Total number of“reg” Publish Successes received. Type: Counter	Int64
reg-pub-succtx	Total number of“reg” Publish Successes transmitted. Type: Counter	Int64
reg-pub-failrx	Total number of“reg” Publish Failures received. Type: Counter	Int64
reg-pub-failtx	Total number of“reg” Publish Failures transmitted. Type: Counter	Int64
reg-pub-resp-3xxrx	Total number of“reg” Publish 3XX Responses received. Type: Counter	Int64
reg-pub-resp-3xxtx	Total number of“reg” Publish 3XX Responses transmitted. Type: Counter	Int64
reg-pub-resp-400rx	Total number of“reg” Publish 400 Responses received. Type: Counter	Int64
reg-pub-resp-400tx	Total number of“reg” Publish 400 Responses transmitted. Type: Counter	Int64
reg-pub-resp-404rx	Total number of“reg” Publish 404 Responses received. Type: Counter	Int64
reg-pub-resp-404tx	Total number of“reg” Publish 404 Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
reg-pub-resp-412rx	Total number of “reg” Publish 412 Responses received. Type: Counter	Int64
reg-pub-resp-412tx	Total number of “reg” Publish 412 Responses transmitted. Type: Counter	Int64
reg-pub-resp-423rx	Total number of “reg” Publish 423 Responses received. Type: Counter	Int64
reg-pub-resp-423tx	Total number of “reg” Publish 423 Responses transmitted. Type: Counter	Int64
reg-pub-resp-489rx	Total number of “reg” Publish 489 Responses received. Type: Counter	Int64
reg-pub-resp-489tx	Total number of “reg” Publish 489 Responses transmitted. Type: Counter	Int64
reg-pub-resp-4xxrx	Total number of “reg” Publish 4XX Responses received. Type: Counter	Int64
reg-pub-resp-4xxtx	Total number of “reg” Publish 4XX Responses transmitted. Type: Counter	Int64
reg-pub-resp-500rx	Total number of “reg” Publish 500 Responses received. Type: Counter	Int64
reg-pub-resp-500tx	Total number of “reg” Publish 500 Responses transmitted. Type: Counter	Int64
reg-pub-resp-503rx	Total number of “reg” Publish 503 Responses received. Type: Counter	Int64
reg-pub-resp-503tx	Total number of “reg” Publish 503 Responses transmitted. Type: Counter	Int64
reg-pub-resp-5xxrx	Total number of “reg” Publish 5XX Responses received. Type: Counter	Int64
reg-pub-resp-5xxtx	Total number of “reg” Publish 5XX Responses transmitted. Type: Counter	Int64
reg-pub-resp-6xxrx	Total number of “reg” Publish 6XX Responses received. Type: Counter	Int64
reg-pub-resp-6xxtx	Total number of “reg” Publish 6XX Responses transmitted. Type: Counter	Int64
reg-unpub-atrx	Total number of “reg” Un-Publish Attempts received. Type: Counter	Int64
reg-unpub-atttx	Total number of “reg” Un-Publish Attempts transmitted. Type: Counter	Int64
reg-unpub-succrx	Total number of “reg” Un-Publish Successes received. Type: Counter	Int64

Variables	Description	Data Type
reg-unpub-succtx	Total number of“reg” Un-Publish Successes transmitted. Type: Counter	Int64
reg-unpub-faiirx	Total number of“reg” Un-Publish Failures received. Type: Counter	Int64
reg-unpub-failtx	Total number of“reg” Un-Publish Failures transmitted. Type: Counter	Int64
reg-unpub-resp-3xxrx	Total number of“reg” Un-Publish 3XX Responses received. Type: Counter	Int64
reg-unpub-resp-3xxtx	Total number of“reg” Un-Publish 3XX Responses transmitted. Type: Counter	Int64
reg-unpub-resp-400rx	Total number of“reg” Un-Publish 400 Responses received. Type: Counter	Int64
reg-unpub-resp-400tx	Total number of“reg” Un-Publish 400 Responses transmitted. Type: Counter	Int64
reg-unpub-resp-404rx	Total number of“reg” Un-Publish 404 Responses received. Type: Counter	Int64
reg-unpub-resp-404tx	Total number of“reg” Un-Publish 404 Responses transmitted. Type: Counter	Int64
reg-unpub-resp-412rx	Total number of“reg” Un-Publish 412 Responses received. Type: Counter	Int64
reg-unpub-resp-412tx	Total number of“reg” Un-Publish 412 Responses transmitted. Type: Counter	Int64
reg-unpub-resp-423rx	Total number of“reg” Un-Publish 423 Responses received. Type: Counter	Int64
reg-unpub-resp-423tx	Total number of“reg” Un-Publish 423 Responses transmitted. Type: Counter	Int64
reg-unpub-resp-489rx	Total number of“reg” Un-Publish 489 Responses received. Type: Counter	Int64
reg-unpub-resp-489tx	Total number of“reg” Un-Publish 489 Responses transmitted. Type: Counter	Int64
reg-unpub-resp-4xxrx	Total number of“reg” Un-Publish 4XX Responses received. Type: Counter	Int64
reg-unpub-resp-4xxtx	Total number of“reg” Un-Publish 4XX Responses transmitted. Type: Counter	Int64
reg-unpub-resp-500rx	Total number of“reg” Un-Publish 500 Responses received. Type: Counter	Int64
reg-unpub-resp-500tx	Total number of“reg” Un-Publish 500 Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
reg-unpub-resp-503rx	Total number of “reg” Un-Publish 503 Responses received. Type: Counter	Int64
reg-unpub-resp-503tx	Total number of “reg” Un-Publish 503 Responses transmitted. Type: Counter	Int64
reg-unpub-resp-5xxrx	Total number of “reg” Un-Publish 5XX Responses received. Type: Counter	Int64
reg-unpub-resp-5xxtx	Total number of “reg” Un-Publish 5XX Responses transmitted. Type: Counter	Int64
reg-unpub-resp-6xxrx	Total number of “reg” Un-Publish 6XX Responses received. Type: Counter	Int64
reg-unpub-resp-6xxtx	Total number of “reg” Un-Publish 6XX Responses transmitted. Type: Counter	Int64
winfo-sub-attrx	Total number of “winfo” Subscription Attempts received. Type: Counter	Int64
winfo-sub-atttx	Total number of “winfo” Subscription Attempts transmitted. Type: Counter	Int64
winfo-sub-succrx	Total number of “winfo” Subscription Successes received. Type: Counter	Int64
winfo-sub-succtx	Total number of “winfo” Subscription Successes transmitted. Type: Counter	Int64
winfo-sub-failrx	Total number of “winfo” Subscription Failures received. Type: Counter	Int64
winfo-sub-failtx	Total number of “winfo” Subscription Failures transmitted. Type: Counter	Int64
winfo-sub-resp-200rx	Total number of “winfo” Subscription 200 Responses received. Type: Counter	Int64
winfo-sub-resp-200tx	Total number of “winfo” Subscription 200 Responses transmitted. Type: Counter	Int64
winfo-sub-resp-202rx	Total number of “winfo” Subscription 202 Responses received. Type: Counter	Int64
winfo-sub-resp-202tx	Total number of “winfo” Subscription 202 Responses transmitted. Type: Counter	Int64
winfo-sub-resp-400rx	Total number of “winfo” Subscription 400 Responses received. Type: Counter	Int64
winfo-sub-resp-400tx	Total number of “winfo” Subscription 400 Responses transmitted. Type: Counter	Int64
winfo-sub-resp-403rx	Total number of “winfo” Subscription 403 Responses received. Type: Counter	Int64

Variables	Description	Data Type
winfo-subsp-403tx	Total number of“winfo” Subscription 403 Responses transmitted. Type: Counter	Int64
winfo-subsp-481rx	Total number of“winfo” Subscription 481 Responses received. Type: Counter	Int64
winfo-subsp-481tx	Total number of“winfo” Subscription 481 Responses transmitted. Type: Counter	Int64
winfo-subsp-489rx	Total number of“winfo” Subscription 489 Responses received. Type: Counter	Int64
winfo-subsp-489tx	Total number of“winfo” Subscription 489 Responses transmitted. Type: Counter	Int64
winfo-subsp-500rx	Total number of“winfo” Subscription 500 Responses received. Type: Counter	Int64
winfo-subsp-500tx	Total number of“winfo” Subscription 500 Responses transmitted. Type: Counter	Int64
winfo-subsp-3xxrx	Total number of“winfo” Subscription 3XX Responses received. Type: Counter	Int64
winfo-subsp-3xxtx	Total number of“winfo” Subscription 3XX Responses transmitted. Type: Counter	Int64
winfo-subsp-4xxrx	Total number of“winfo” Subscription 4XX Responses received. Type: Counter	Int64
winfo-subsp-4xxtx	Total number of“winfo” Subscription 4XX Responses transmitted. Type: Counter	Int64
winfo-subsp-5xxrx	Total number of“winfo” Subscription 5XX Responses received. Type: Counter	Int64
winfo-subsp-5xxtx	Total number of“winfo” Subscription 5XX Responses transmitted. Type: Counter	Int64
winfo-subsp-6xxrx	Total number of“winfo” Subscription 6XX Responses received. Type: Counter	Int64
winfo-subsp-6xxtx	Total number of“winfo” Subscription 6XX Responses transmitted. Type: Counter	Int64
winfo-resubsp-atrx	Total number of“winfo” Refresh Subscription Attempts received. Type: Counter	Int64
winfo-resubsp-attx	Total number of“winfo” Refresh Subscription Attempts transmitted. Type: Counter	Int64
winfo-resubsp-succrx	Total number of“winfo” Refresh Subscription Successes received. Type: Counter	Int64
winfo-resubsp-succtx	Total number of“winfo” Refresh Subscription Successes transmitted. Type: Counter	Int64

Variables	Description	Data Type
winfo-resubs-failrx	Total number of “winfo” Refresh Subscription Failures received. Type: Counter	Int64
winfo-resubs-failtx	Total number of “winfo” Refresh Subscription Failures transmitted. Type: Counter	Int64
winfo-resubs-resp-200rx	Total number of “winfo” Refresh Subscription 200 Responses received. Type: Counter	Int64
winfo-resubs-resp-200tx	Total number of “winfo” Refresh Subscription 200 Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-202rx	Total number of “winfo” Refresh Subscription 202 Responses received. Type: Counter	Int64
winfo-resubs-resp-202tx	Total number of “winfo” Refresh Subscription 202 Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-400rx	Total number of “winfo” Refresh Subscription 400 Responses received. Type: Counter	Int64
winfo-resubs-resp-400tx	Total number of “winfo” Refresh Subscription 400 Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-403rx	Total number of “winfo” Refresh Subscription 403 Responses received. Type: Counter	Int64
winfo-resubs-resp-403tx	Total number of “winfo” Refresh Subscription 403 Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-481rx	Total number of “winfo” Refresh Subscription 481 Responses received. Type: Counter	Int64
winfo-resubs-resp-481tx	Total number of “winfo” Refresh Subscription 481 Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-489rx	Total number of “winfo” Refresh Subscription 489 Responses received. Type: Counter	Int64
winfo-resubs-resp-489tx	Total number of “winfo” Refresh Subscription 489 Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-500rx	Total number of “winfo” Refresh Subscription 500 Responses received. Type: Counter	Int64
winfo-resubs-resp-500tx	Total number of “winfo” Refresh Subscription 500 Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-3xxrx	Total number of “winfo” Refresh Subscription 3XX Responses received. Type: Counter	Int64
winfo-resubs-resp-3xxtx	Total number of “winfo” Refresh Subscription 3XX Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-4xxrx	Total number of “winfo” Refresh Subscription 4XX Responses received. Type: Counter	Int64

Variables	Description	Data Type
winfo-resubs-resp-4xxtx	Total number of“winfo” Refresh Subscription 4XX Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-5xxrx	Total number of“winfo” Refresh Subscription 5XX Responses received. Type: Counter	Int64
winfo-resubs-resp-5xxtx	Total number of“winfo” Refresh Subscription 5XX Responses transmitted. Type: Counter	Int64
winfo-resubs-resp-6xxrx	Total number of“winfo” Refresh Subscription 6XX Responses received. Type: Counter	Int64
winfo-resubs-resp-6xxtx	Total number of“winfo” Refresh Subscription 6XX Responses transmitted. Type: Counter	Int64
winfo-unsubs-attrx	Total number of“winfo” Un-Subscription Attempts received. Type: Counter	Int64
winfo-unsubs-atttx	Total number of“winfo” Un-Subscription Attempts transmitted. Type: Counter	Int64
winfo-unsubs-sucrx	Total number of“winfo” Un-Subscription Successes received. Type: Counter	Int64
winfo-unsubs-suctx	Total number of“winfo” Un-Subscription Successes transmitted. Type: Counter	Int64
winfo-unsubs-failrx	Total number of“winfo” Un-Subscription Failures received. Type: Counter	Int64
winfo-unsubs-failtx	Total number of“winfo” Un-Subscription Failures transmitted. Type: Counter	Int64
winfo-unsubs-resp-200rx	Total number of“winfo” Un-Subscription 200 Responses received. Type: Counter	Int64
winfo-unsubs-resp-200tx	Total number of“winfo” Un-Subscription 200 Responses transmitted. Type: Counter	Int64
winfo-unsubs-resp-202rx	Total number of“winfo” Un-Subscription 202 Responses received. Type: Counter	Int64
winfo-unsubs-resp-202tx	Total number of“winfo” Un-Subscription 202 Responses transmitted. Type: Counter	Int64
winfo-unsubs-resp-400rx	Total number of“winfo” Un-Subscription 400 Responses received. Type: Counter	Int64
winfo-unsubs-resp-400tx	Total number of“winfo” Un-Subscription 400 Responses transmitted. Type: Counter	Int64
winfo-unsubs-resp-403rx	Total number of“winfo” Un-Subscription 403 Responses received. Type: Counter	Int64
winfo-unsubs-resp-403tx	Total number of“winfo” Un-Subscription 403 Responses transmitted. Type: Counter	Int64

■ Common Syntax Options

Variables	Description	Data Type
winfo-unsubs-resp-481rx	Total number of “winfo” Un-Subscription 481 Responses received. Type: Counter	Int64
winfo-unsubs-resp-481tx	Total number of “winfo” Un-Subscription 481 Responses transmitted. Type: Counter	Int64
winfo-unsubs-resp-489rx	Total number of “winfo” Un-Subscription 489 Responses received. Type: Counter	Int64
winfo-unsubs-resp-489tx	Total number of “winfo” Un-Subscription 489 Responses transmitted. Type: Counter	Int64
winfo-unsubs-resp-500rx	Total number of “winfo” Un-Subscription 500 Responses received. Type: Counter	Int64
winfo-unsubs-resp-500tx	Total number of “winfo” Un-Subscription 500 Responses transmitted. Type: Counter	Int64
winfo-unsubs-resp-3xxrx	Total number of “winfo” Un-Subscription 3XX Responses received. Type: Counter	Int64
winfo-unsubs-resp-3xxtx	Total number of “winfo” Un-Subscription 3XX Responses transmitted. Type: Counter	Int64
winfo-unsubs-resp-4xxrx	Total number of “winfo” Un-Subscription 4XX Responses received. Type: Counter	Int64
winfo-unsubs-resp-4xxtx	Total number of “winfo” Un-Subscription 4XX Responses transmitted. Type: Counter	Int64
winfo-unsubs-resp-5xxrx	Total number of “winfo” Un-Subscription 5XX Responses received. Type: Counter	Int64
winfo-unsubs-resp-5xxtx	Total number of “winfo” Un-Subscription 5XX Responses transmitted. Type: Counter	Int64
winfo-unsubs-resp-6xxrx	Total number of “winfo” Un-Subscription 6XX Responses received. Type: Counter	Int64
winfo-unsubs-resp-6xxtx	Total number of “winfo” Un-Subscription 6XX Responses transmitted. Type: Counter	Int64
winfo-notify-atrx	Total number of “winfo” Notify Attempts received. Type: Counter	Int64
winfo-notify-atttx	Total number of “winfo” Notify Attempts transmitted. Type: Counter	Int64
winfo-notify-succrx	Total number of “winfo” Notify Successes received. Type: Counter	Int64
winfo-notify-succtx	Total number of “winfo” Notify Successes transmitted. Type: Counter	Int64
winfo-notify-failrx	Total number of “winfo” Notify Failures received. Type: Counter	Int64

Variables	Description	Data Type
winfo-notify-failtx	Total number of“winfo” Notify Failures transmitted. Type: Counter	Int64
winfo-notify-resp-3xxrx	Total number of“winfo” Notify 3XX Responses received. Type: Counter	Int64
winfo-notify-resp-3xxtx	Total number of“winfo” Notify 3XX Responses transmitted. Type: Counter	Int64
winfo-notify-resp-400rx	Total number of“winfo” Notify 400 Responses received. Type: Counter	Int64
winfo-notify-resp-400tx	Total number of“winfo” Notify 400 Responses transmitted. Type: Counter	Int64
winfo-notify-resp-481rx	Total number of“winfo” Notify 481 Responses received. Type: Counter	Int64
winfo-notify-resp-481tx	Total number of“winfo” Notify 481 Responses transmitted. Type: Counter	Int64
winfo-notify-resp-489rx	Total number of“winfo” Notify 489 Responses received. Type: Counter	Int64
winfo-notify-resp-489tx	Total number of“winfo” Notify 489 Responses transmitted. Type: Counter	Int64
winfo-notify-resp-4xxrx	Total number of“winfo” Notify 4XX Responses received. Type: Counter	Int64
winfo-notify-resp-4xxtx	Total number of“winfo” Notify 4XX Responses transmitted. Type: Counter	Int64
winfo-notify-resp-500rx	Total number of“winfo” Notify 500 Responses received. Type: Counter	Int64
winfo-notify-resp-500tx	Total number of“winfo” Notify 500 Responses transmitted. Type: Counter	Int64
winfo-notify-resp-5xxrx	Total number of“winfo” Notify 5XX Responses received. Type: Counter	Int64
winfo-notify-resp-5xxtx	Total number of“winfo” Notify 5XX Responses transmitted. Type: Counter	Int64
winfo-notify-resp-6xxrx	Total number of“winfo” Notify 6XX Responses received. Type: Counter	Int64
winfo-notify-resp-6xxtx	Total number of“winfo” Notify 6XX Responses transmitted. Type: Counter	Int64
winfo-pub-attrx	Total number of“winfo” Publish Attempts received. Type: Counter	Int64
winfo-pub-atttx	Total number of“winfo” Publish Attempts transmitted. Type: Counter	Int64

Variables	Description	Data Type
winfo-pub-succrx	Total number of “winfo” Publish Successes received. Type: Counter	Int64
winfo-pub-succtx	Total number of “winfo” Publish Successes transmitted. Type: Counter	Int64
winfo-pub-failrx	Total number of “winfo” Publish Failures received. Type: Counter	Int64
winfo-pub-failtx	Total number of “winfo” Publish Failures transmitted. Type: Counter	Int64
winfo-pub-resp-3xxrx	Total number of “winfo” Publish 3XX Responses received. Type: Counter	Int64
winfo-pub-resp-3xxtx	Total number of “winfo” Publish 3XX Responses transmitted. Type: Counter	Int64
winfo-pub-resp-400rx	Total number of “winfo” Publish 400 Responses received. Type: Counter	Int64
winfo-pub-resp-400tx	Total number of “winfo” Publish 400 Responses transmitted. Type: Counter	Int64
winfo-pub-resp-404rx	Total number of “winfo” Publish 404 Responses received. Type: Counter	Int64
winfo-pub-resp-404tx	Total number of “winfo” Publish 404 Responses transmitted. Type: Counter	Int64
winfo-pub-resp-412rx	Total number of “winfo” Publish 412 Responses received. Type: Counter	Int64
winfo-pub-resp-412tx	Total number of “winfo” Publish 412 Responses transmitted. Type: Counter	Int64
winfo-pub-resp-423rx	Total number of “winfo” Publish 423 Responses received. Type: Counter	Int64
winfo-pub-resp-423tx	Total number of “winfo” Publish 423 Responses transmitted. Type: Counter	Int64
winfo-pub-resp-489rx	Total number of “winfo” Publish 489 Responses received. Type: Counter	Int64
winfo-pub-resp-489tx	Total number of “winfo” Publish 489 Responses transmitted. Type: Counter	Int64
winfo-pub-resp-4xxrx	Total number of “winfo” Publish 4XX Responses received. Type: Counter	Int64
winfo-pub-resp-4xxtx	Total number of “winfo” Publish 4XX Responses transmitted. Type: Counter	Int64
winfo-pub-resp-500rx	Total number of “winfo” Publish 500 Responses received. Type: Counter	Int64

Variables	Description	Data Type
winfo-pub-resp-500tx	Total number of“winfo” Publish 500 Responses transmitted. Type: Counter	Int64
winfo-pub-resp-503rx	Total number of“winfo” Publish 503 Responses received. Type: Counter	Int64
winfo-pub-resp-503tx	Total number of“winfo” Publish 503 Responses transmitted. Type: Counter	Int64
winfo-pub-resp-5xxrx	Total number of“winfo” Publish 5XX Responses received. Type: Counter	Int64
winfo-pub-resp-5xxtx	Total number of“winfo” Publish 5XX Responses transmitted. Type: Counter	Int64
winfo-pub-resp-6xxrx	Total number of“winfo” Publish 6XX Responses received. Type: Counter	Int64
winfo-pub-resp-6xxtx	Total number of“winfo” Publish 6XX Responses transmitted. Type: Counter	Int64
winfo-unpub-atrrx	Total number of“winfo” Un-Publish Attempts received. Type: Counter	Int64
winfo-unpub-atttx	Total number of“winfo” Un-Publish Attempts transmitted. Type: Counter	Int64
winfo-unpub-succrx	Total number of“winfo” Un-Publish Successes received. Type: Counter	Int64
winfo-unpub-succtx	Total number of“winfo” Un-Publish Successes transmitted. Type: Counter	Int64
winfo-unpub-failrx	Total number of“winfo” Un-Publish Failures received. Type: Counter	Int64
winfo-unpub-failtx	Total number of“winfo” Un-Publish Failures transmitted. Type: Counter	Int64
winfo-unpub-resp-3xxrx	Total number of“winfo” Un-Publish 3XX Responses received. Type: Counter	Int64
winfo-unpub-resp-3xxtx	Total number of“winfo” Un-Publish 3XX Responses transmitted. Type: Counter	Int64
winfo-unpub-resp-400rx	Total number of“winfo” Un-Publish 400 Responses received. Type: Counter	Int64
winfo-unpub-resp-400tx	Total number of“winfo” Un-Publish 400 Responses transmitted. Type: Counter	Int64
winfo-unpub-resp-404rx	Total number of“winfo” Un-Publish 404 Responses received. Type: Counter	Int64
winfo-unpub-resp-404tx	Total number of“winfo” Un-Publish 404 Responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
winfo-unpub-resp-412rx	Total number of “winfo” Un-Publish 412 Responses received. Type: Counter	Int64
winfo-unpub-resp-412tx	Total number of “winfo” Un-Publish 412 Responses transmitted. Type: Counter	Int64
winfo-unpub-resp-423rx	Total number of “winfo” Un-Publish 423 Responses received. Type: Counter	Int64
winfo-unpub-resp-423tx	Total number of “winfo” Un-Publish 423 Responses transmitted. Type: Counter	Int64
winfo-unpub-resp-489rx	Total number of “winfo” Un-Publish 489 Responses received. Type: Counter	Int64
winfo-unpub-resp-489tx	Total number of “winfo” Un-Publish 489 Responses transmitted. Type: Counter	Int64
winfo-unpub-resp-4xxrx	Total number of “winfo” Un-Publish 4XX Responses received. Type: Counter	Int64
winfo-unpub-resp-4xxtx	Total number of “winfo” Un-Publish 4XX Responses transmitted. Type: Counter	Int64
winfo-unpub-resp-500rx	Total number of “winfo” Un-Publish 500 Responses received. Type: Counter	Int64
winfo-unpub-resp-500tx	Total number of “winfo” Un-Publish 500 Responses transmitted. Type: Counter	Int64
winfo-unpub-resp-503rx	Total number of “winfo” Un-Publish 503 Responses received. Type: Counter	Int64
winfo-unpub-resp-503tx	Total number of “winfo” Un-Publish 503 Responses transmitted. Type: Counter	Int64
winfo-unpub-resp-5xxrx	Total number of “winfo” Un-Publish 5XX Responses received. Type: Counter	Int64
winfo-unpub-resp-5xxtx	Total number of “winfo” Un-Publish 5XX Responses transmitted. Type: Counter	Int64
winfo-unpub-resp-6xxrx	Total number of “winfo” Un-Publish 6XX Responses received. Type: Counter	Int64
winfo-unpub-resp-6xxtx	Total number of “winfo” Un-Publish 6XX Responses transmitted. Type: Counter	Int64
message-atrx	Total number of Message attempts received. Type: Counter	Int32
message-atttx	Total number of Message attempts transmitted. Type: Counter	Int32
message-succrx	Total number of Message success received. Type: Counter	Int32

Variables	Description	Data Type
message-succtx	Total number of Message success transmitted. Type: Counter	Int32
message-failrx	Total number of Message failures received. Type: Counter	Int32
message-failtx	Total number of Message failures transmitted. Type: Counter	Int32
message-3xx-rx	Total number of Message 3xx Responses received. Type: Counter	Int32
message-3xx-tx	Total number of Message 3xx Responses transmitted. Type: Counter	Int32
message-400-rx	Total number of Message 400 Responses received. Type: Counter	Int32
message-400-tx	Total number of Message 400 Responses transmitted. Type: Counter	Int32
message-403-rx	Total number of Message 403 Responses received. Type: Counter	Int32
message-403-tx	Total number of Message 403 Responses transmitted. Type: Counter	Int32
message-404-rx	Total number of Message 404 Responses received. Type: Counter	Int32
message-404-tx	Total number of Message 404 Responses transmitted. Type: Counter	Int32
message-413-rx	Total number of Message 413 Responses received. Type: Counter	Int32
message-413-tx	Total number of Message 413 Responses transmitted. Type: Counter	Int32
message-415-rx	Total number of Message 415 Responses received. Type: Counter	Int32
message-415-tx	Total number of Message 415 Responses transmitted. Type: Counter	Int32
message-416-rx	Total number of Message 416 Responses received. Type: Counter	Int32
message-416-tx	Total number of Message 416 Responses transmitted. Type: Counter	Int32
message-420-rx	Total number of Message 420 Responses received. Type: Counter	Int32
message-420-tx	Total number of Message 420 Responses transmitted. Type: Counter	Int32

Variables	Description	Data Type
message-421-rx	Total number of Message 421 Response received. Type: Counter	Int32
message-421-tx	Total number of Message 421 Responses transmitted. Type: Counter	Int32
message-480-rx	Total number of Message 480 Responses received. Type: Counter	Int32
message-480-tx	Total number of Message 480 Responses transmitted. Type: Counter	Int32
message-488-rx	Total number of Message 488 Responses received. Type: Counter	Int32
message-488-tx	Total number of Message 488 Responses transmitted. Type: Counter	Int32
message-4xx-rx	Total number of Message 4xx Responses received. Type: Counter	Int32
message-4xx-tx	Total number of Message 4xx Responses transmitted. Type: Counter	Int32
message-500-rx	Total number of Message 500 Responses received. Type: Counter	Int32
message-500-tx	Total number of Message 500 Responses transmitted. Type: Counter	Int32
message-513-rx	Total number of Message 513 Responses received. Type: Counter	Int32
message-513-tx	Total number of Message 513 Responses transmitted. Type: Counter	Int32
message-5xx-rx	Total number of Message 5xx Responses received. Type: Counter	Int32
message-5xx-tx	Total number of Message 5xx Responses transmitted. Type: Counter	Int32
message-6xx-rx	Total number of Message 6xx Responses received. Type: Counter	Int32
message-6xx-tx	Total number of Total Message 6xx Responses transmitted. Type: Counter	Int32
callrejpdf	Total number of Call Rejects from PDF. Type: Counter	Int64
callrejloc	Total number of Call Rejects from Proxy (local). Type: Counter	Int64
sesstimeexp	Total number of Session Timer Expires. Type: Counter	Int64

Variables	Description	Data Type
hssacc	Total number of HSS Accesses. Type: Counter	Int64
emergcalls	Total number of Emergency Calls. Type: Counter	Int64
emerg-priv-calls	Total number of User-requested Privacy Calls. Applicable only for E-CSCF. Type: Counter	Int64
tollfreecalls	Total number of Toll Free Calls. Type: Counter	Int64
premservcalls	Total number of Premium Service Calls. Type: Counter	Int64
internationalcalls	Total number of International Calls. Type: Counter	Int64
longDistancecalls	Total number of Long Distance Calls. Type: Counter	Int64
opassistcalls	Total number of Operator Assisted Calls. Type: Counter	Int64
dirassistcalls	Total number of Directory Assisted Calls. Type: Counter	Int64
largerthansipmaxsize	Total number of Too Large SIP Messages. Type: Counter	Int64
rtp-sent	Total number of RTP packets sent. Type: Counter	Int64
rtcp-sent	Total number of RTCP packets sent. Type: Counter	Int64
rtp-recv	Total number of RTP packets received. Type: Counter	Int64
msrp-sent	Total number of MSRP TCP packets sent. Type: Counter	Int64
msrp-recv	Total number of MSRP TCP packets received. Type: Counter	Int64
callrel-from-ue	Total number of Call Releases initiated by UE. Type: Counter	Int64
callrel-from-nw	Total number of Call Releases initiated by Network. Type: Counter	Int64
callrel-from-radioloss	Total number of Call Releases initiated by Radio Loss. Type: Counter	Int64
callrel-from-local	Total number of Call Releases initiated by CSCF (Local). Type: Counter	Int64

Variables	Description	Data Type
sigcomp-req-comp	Total number of Requests Compressed. Type: Counter	Int64
sigcomp-req-decomp	Total number of Requests Decompressed. Type: Counter	Int64
sigcomp-resp-comp	Total number of Responses Compressed. Type: Counter	Int64
sigcomp-resp-decomp	Total number of Responses Decompressed. Type: Counter	Int64
sigcomp-nack-rx	Total number of NACK Packets received. Type: Counter	Int64
sigcomp-nack-tx	Total number of NACK Packets transmitted. Type: Counter	Int64
sigcomp-comp-fail	Total number of Compression Failures. Type: Counter	Int64
sigcomp-decomp-fail	Total number of Decompression Failures. Type: Counter	Int64
sigcomp-bestout-compratio	Best Outgoing Message Compression Ratio Type: Gauge	Float
sigcomp-worstout-compratio	Worst Outgoing Message Compression Ratio Type: Gauge	Float
sigcomp-bestin-compratio	Best Incoming Message Compression Ratio Type: Gauge	Float
sigcomp-worstin-compratio	Worst Incoming Message Compression Ratio Type: Gauge	Float
sigcomp-averagein-compratio	Average Incoming Message Compression Ratio Type: Gauge	Float
sigcomp-averageout-compratio	Average Outgoing Message Compression Ratio Type: Gauge	Float
min-invite-proc-time	Minimum Invite Process Time Type: Gauge	Int32
max-invite-proc-time	Maximum Invite Process Timer Type: Gauge	Int32
min-first-resp-time	Minimum First Response Time Type: Gauge	Int32
max-first-resp-time	Maximum First Response Time Type: Gauge	Int32
min-post-dial-delay	Minimum Post-Dial Delay Type: Gauge	Int32

Variables	Description	Data Type
max-post-dial-delay	Maximum Post-Dial Delay Type: Gauge	Int32
min-session-setup-delay	Minimum Session Setup Delay Type: Gauge	Int32
max-session-setup-delay	Maximum Session Setup Delay Type: Gauge	Int32
min-post-answer-delay	Minimum Post Answer Delay Type: Gauge	Int32
max-post-answer-delay	Maximum Post Answer Delay Type: Gauge	Int32
min-session-rel-delay	Minimum Session Release Delay Type: Gauge	Int32
max-session-rel-delay	Maximum Session Release Delay Type: Gauge	Int32
active-tcp-conn	Total number of Active TCP connections. Type: Gauge	Int64
closed-tcp-conn	Total number of Closed TCP connections. Type: Counter	Int64
succ-tcp-conn-out	Total number of Successful Outgoing connections. Type: Counter	Int64
fail-tcp-conn-out	Total number of Failed Outgoing connections. Type: Counter	Int64
succ-tcp-conn-in	Total number of Successful Incoming connections. Type: Counter	Int64
fail-tcp-conn-in	Total number of Failed Incoming connections. Type: Counter	Int64
migrated-tcp-conn	Total number of TCP connections migrated from Cscfmgr to Sessmgr for load balancing. Type: Counter	Int64
packet-tcp-rx	Total number of TCP/IP packets received by CSCF service. Type: Counter	Int64
packet-tcp-tx	Total number of TCP/IP packets transmitted by CSCF service. Type: Counter	Int64
bytes-tcp-rx	Total number of TCP/IP bytes received by CSCF service. Type: Counter	Int64
bytes-tcp-tx	Total number of TCP/IP bytes transmitted by CSCF service. Type: Counter	Int64
message-tcp-request-rx	Total number of TCP requests received over TCP. Type: Counter	Int64

Variables	Description	Data Type
message-tcp-request-tx	Total number of TCP requests transmitted over TCP. Type: Counter	Int64
message-tcp-response-rx	Total number of TCP responses received over TCP. Type: Counter	Int64
message-tcp-response-tx	Total number of TCP responses transmitted over TCP. Type: Counter	Int64
message-tcp-mtu-switch	Total number of times CSCF switched from UDP to TCP because of message size larger than MTU. Type: Counter	Int64
sip-tcp-sub	Total number of subscribers using TCP for SIP. Type: Gauge	Int64
msrp-active-tcp-conn	Total number of active MSRP TCP connections. Type: Counter	Int64
msrp-closed-tcp-conn	Total number of closed MSRP TCP connections. Type: Counter	Int64
msrp-succ-tcp-conn-out	Total number of outgoing MSRP TCP connections established successfully. Type: Counter	Int64
msrp-fail-tcp-conn-out	Total number of failed outgoing MSRP TCP connections. Type: Counter	Int64
msrp-succ-tcp-conn-in	Total number of incoming MSRP TCP connections established successfully. Type: Counter	Int64
msrp-fail-tcp-conn-in	Total number of failed incoming MSRP TCP connections. Type: Counter	Int64
msrp-packet-rx	Total number of MSRP packets received. Type: Counter	Int64
msrp-packet-tx	Total number of MSRP packets transmitted. Type: Counter	Int64
msrp-bytes-rx	Total number of MSRP bytes received. Type: Counter	Int64
msrp-bytes-tx	Total number of MSRP bytes transmitted. Type: Counter	Int64
msrp-tcp-sub	Total number of subscribers with TCP connection for MSRP. Type: Gauge	Int64
reg-rejdueto-secagree	Total number of Registration Rejects due to Security Agreement Type: Counter	Int64
reg-rejdueto-algomismatch	Total number of Registration Rejects due to Algorithm Mismatch Type: Counter	Int64
msg-drops-duetoerror	Total number of Message drops due to error. Type: Counter	Int64

Variables	Description	Data Type
sec-rereg	Total number of Secure re-registrations Type: Counter	Int64
sec-dereg	Total number of Secure de-registrations Type: Counter	Int64
msgs-withincorr-sec-verify	Total number of Messages with Incorrect security Verify Type: Counter	Int64
sec-assoc-rejects	Total number of Security Associations rejected. Type: Counter	Int64
sub-with-sec-conn	Total number of Subscribers with secure connections. Type: Gauge	Int32
sub-with-unsec-conn	Total number of Subscribers with unsecure connections. Type: Gauge	Int32
ipsec-pktrx	Total number of IP-Sec Packets received. Type: Counter	Int64
ipsec-pkttx	Total number of IP-Sec Packets transmitted. Type: Counter	Int64
ipsec-octrx	Total number of IP-Sec Octets received. Type: Counter	Int64
ipsec-octtx	Total number of IP-Sec Octets transmitted. Type: Counter	Int64
active-ipsec-tcp-conn	Total number of Active IPSec TCP connections Type: Gauge	Int64
closed-ipsec-tcp-conn	Total number of Closed IPSec TCP connections Type: Counter	Int64
succ-ipsec-tcp-conn-out	Total number of Successful IPSec Outgoing connections Type: Counter	Int64
fail-ipsec-tcp-conn-out	Total number of Failed IPSec Outgoing connections Type: Counter	Int64
succ-ipsec-tcp-conn-in	Total number of Successful IPSec Incoming connections Type: Counter	Int64
fail-ipsec-tcp-conn-in	Total number of Failed IPSec Incoming connections Type: Counter	Int64
regreqrx	Total number of Register requests received. Type: Counter	Int64
regreqtx	Total number of Register requests transmitted. Type: Counter	Int64
invreqrx	Total number of Invite requests received. Type: Counter	Int64

Variables	Description	Data Type
invreqtx	Total number of Invite requests transmitted. Type: Counter	Int64
ackreqrx	Total number of ACK requests received. Type: Counter	Int64
ackreqtx	Total number of ACK requests transmitted. Type: Counter	Int64
byereqrx	Total number of Bye requests received. Type: Counter	Int64
byereqtx	Total number of Bye requests transmitted. Type: Counter	Int64
cancreqrx	Total number of Cancel requests received. Type: Counter	Int64
cancreqtx	Total number of Cancel requests transmitted. Type: Counter	Int64
optreqrx	Total number of Options requests received. Type: Counter	Int64
optreqtx	Total number of Options requests transmitted. Type: Counter	Int64
prackreqrx	Total number of PRACK requests received. Type: Counter	Int64
prackreqtx	Total number of PRACK requests transmitted. Type: Counter	Int64
subreqrx	Total number of Subscribe requests received. Type: Counter	Int64
subreqtx	Total number of Subscribe requests transmitted. Type: Counter	Int64
notreqrx	Total number of Notify requests received. Type: Counter	Int64
notreqtx	Total number of Notify requests transmitted. Type: Counter	Int64
refreqrx	Total number of Refer requests received. Type: Counter	Int64
refreqtx	Total number of Refer requests transmitted. Type: Counter	Int64
infoeqrx	Total number of Info requests received. Type: Counter	Int64
infoeqtx	Total number of Info requests transmitted. Type: Counter	Int64

Variables	Description	Data Type
updreqrx	Total number of Update requests received. Type: Counter	Int64
updreqtx	Total number of Update requests transmitted. Type: Counter	Int64
msgreqrx	Total number of Message requests received. Type: Counter	Int64
msgreqtx	Total number of Message requests transmitted. Type: Counter	Int64
pubreqrx	Total number of Publish requests received. Type: Counter	Int64
pubreqtx	Total number of Publish requests transmitted. Type: Counter	Int64
trysprx	Total number of Trying responses received. Type: Counter	Int64
trysptx	Total number of Trying responses transmitted. Type: Counter	Int64
rngsprx	Total number of Ringing responses received. Type: Counter	Int64
rngsptx	Total number of Ringing responses transmitted. Type: Counter	Int64
fwdrsprx	Total number of Forwarded responses received. Type: Counter	Int64
fwdrsptx	Total number of Forwarded responses transmitted. Type: Counter	Int64
quersprx	Total number of Queued responses received. Type: Counter	Int64
quersptx	Total number of Queued responses transmitted. Type: Counter	Int64
prgrsprx	Total number of Progress responses received. Type: Counter	Int64
prgrsptx	Total number of Progress responses transmitted. Type: Counter	Int64
200-regrsprx	Total number of 200OK Register responses received. Type: Counter	Int64
200-regrsptx	Total number of 200OK Register responses transmitted. Type: Counter	Int64
200-invrsprx	Total number of 200OK Invite responses received. Type: Counter	Int64

Variables	Description	Data Type
200-invrspstx	Total number of 200OK Invite responses transmitted. Type: Counter	Int64
200-byersprx	Total number of 200OK Bye responses received. Type: Counter	Int64
200-byersptx	Total number of 200OK Bye responses transmitted. Type: Counter	Int64
200-cnlsprx	Total number of 200OK Cancel responses received. Type: Counter	Int64
200-cnlsptx	Total number of 200OK Cancel responses transmitted. Type: Counter	Int64
200-optsprx	Total number of 200OK Options responses received. Type: Counter	Int64
200-optspstx	Total number of 200OK Options responses transmitted. Type: Counter	Int64
200-prackrsprx	Total number of 200OK PRACK responses received. Type: Counter	Int64
200-prackrsptx	Total number of 200OK PRACK responses transmitted. Type: Counter	Int64
200-subrsprx	Total number of 200OK Subscribe responses received. Type: Counter	Int64
200-subrsptx	Total number of 200OK Subscribe responses transmitted. Type: Counter	Int64
200-notrsprx	Total number of 200OK Notify responses received. Type: Counter	Int64
200-notrsptx	Total number of 200OK Notify responses transmitted. Type: Counter	Int64
200-infrsprx	Total number of 200OK Info responses received. Type: Counter	Int64
200-infrsptx	Total number of 200OK Info responses transmitted. Type: Counter	Int64
200-updrsprx	Total number of 200OK Update responses received. Type: Counter	Int64
200-updrspstx	Total number of 200OK Update responses transmitted. Type: Counter	Int64
200-pubrsprx	Total number of 200OK Publish responses received. Type: Counter	Int64
200-pubrsptx	Total number of 200OK Publish responses transmitted. Type: Counter	Int64

Variables	Description	Data Type
200-refrsprx	Total number of 200OK Refer responses received. Type: Counter	Int64
200-refrsptx	Total number of 200OK Refer responses transmitted. Type: Counter	Int64
200-msgrsprx	Total number of 200OK Message responses received. Type: Counter	Int64
200-msgrsptx	Total number of 200OK Message responses transmitted. Type: Counter	Int64
202-refrsprx	Total number of 202Accepted Refer responses received. Type: Counter	Int64
202-refrsptx	Total number of 202Accepted Refer responses transmitted. Type: Counter	Int64
202-subrsprx	Total number of 202Accepted Subscribe responses received. Type: Counter	Int64
202-subrsptx	Total number of 202Accepted Subscribe responses transmitted. Type: Counter	Int64
mchrsprx	Total number of Multiple Choices responses received. Type: Counter	Int64
mchrsptx	Total number of Multiple Choices responses transmitted. Type: Counter	Int64
mpersprx	Total number of Moved Permanently responses received. Type: Counter	Int64
mpersptx	Total number of Moved Permanently responses transmitted. Type: Counter	Int64
mtersprx	Total number of Moved Temporarily responses received. Type: Counter	Int64
mtersptx	Total number of Moved Temporarily responses transmitted. Type: Counter	Int64
upxrsprx	Total number of Use Proxy responses received. Type: Counter	Int64
upxrsptx	Total number of Use Proxy responses transmitted. Type: Counter	Int64
altrsprx	Total number of Alternative Service responses received. Type: Counter	Int64
altrsptx	Total number of Alternative Service responses transmitted. Type: Counter	Int64
brqerrrx	Total number of BadRequest errors received. Type: Counter	Int64

Variables	Description	Data Type
brqerrtx	Total number of BadRequest errors transmitted. Type: Counter	Int64
uauerrrx	Total number of Unauthorized errors received. Type: Counter	Int64
uauerrtx	Total number of Unauthorized errors transmitted. Type: Counter	Int64
prerrrx	Total number of Payment Required Errors received. Type: Counter	Int64
prerrtx	Total number of Payment Required Errors transmitted. Type: Counter	Int64
forerrrx	Total number of Forbidden errors received. Type: Counter	Int64
forerrtx	Total number of Forbidden errors transmitted. Type: Counter	Int64
nfderrrx	Total number of NotFound errors received. Type: Counter	Int64
nfderrtx	Total number of NotFound errors transmitted. Type: Counter	Int64
mnaerrrx	Total number of MethodNotAllowed errors received. Type: Counter	Int64
mnaerrtx	Total number of MethodNotAllowed errors transmitted. Type: Counter	Int64
nac406errrx	Total number of NotAcceptable(406) errors received. Type: Counter	Int64
nac406errtx	Total number of NotAcceptable(406) errors transmitted. Type: Counter	Int64
parerrrx	Total number of ProxyAuthRequired errors received. Type: Counter	Int64
parerrtx	Total number of ProxyAuthRequired errors transmitted. Type: Counter	Int64
rtoerrrx	Total number of RequestTimeout errors received. Type: Counter	Int64
rtoerrtx	Total number of RequestTimeout errors transmitted. Type: Counter	Int64
conferrrx	Total number of Conflict Errors received. Type: Counter	Int64
conferrtx	Total number of Conflict Errors transmitted. Type: Counter	Int64

Variables	Description	Data Type
lerrrx	Total number of Length Required Errors received. Type: Counter	Int64
lerrtx	Total number of Length Required Errors transmitted. Type: Counter	Int64
gonerrrx	Total number of Gone errors received. Type: Counter	Int64
gonerrtx	Total number of Gone errors transmitted. Type: Counter	Int64
crferrrx	Total number of ConditionalRequestFail errors received. Type: Counter	Int64
crferrtx	Total number of ConditionalRequestFail errors transmitted. Type: Counter	Int64
reerrrx	Total number of RequestEntityTooLarge errors received. Type: Counter	Int64
reerrtx	Total number of RequestEntityTooLarge errors transmitted. Type: Counter	Int64
rulerrrx	Total number of RequestURITooLong errors received. Type: Counter	Int64
rulerrtx	Total number of RequestURITooLong errors transmitted. Type: Counter	Int64
umerrrx	Total number of UnsupportedMediaType errors received. Type: Counter	Int64
umerrtx	Total number of UnsupportedMediaType errors transmitted. Type: Counter	Int64
uuserrx	Total number of UnsupportedURI Scheme errors received. Type: Counter	Int64
uusertx	Total number of UnsupportedURI Scheme errors transmitted. Type: Counter	Int64
bexerrrx	Total number of BadExtension errors received. Type: Counter	Int64
bexerrtx	Total number of BadExtension errors transmitted. Type: Counter	Int64
exerrrx	Total number of Extension Required errors received. Type: Counter	Int64
exerrtx	Total number of Extension Required errors transmitted. Type: Counter	Int64
sitserrx	Total number of Session Interval Too Small errors received Type: Counter	Int64

Variables	Description	Data Type
sitserrrx	Total number of Session Interval Too Small errors transmitted. Type: Counter	Int64
fhloerrrx	Total number of First Hop Lacks Outbound Support (439) errors received. Type: Counter	Int64
fhloerrtx	Total number of First Hop Lacks Outbound Support (439) errors transmitted. Type: Counter	Int64
itberrrx	Total number of Interval Too Brief errors received. Type: Counter	Int64
itberrrtx	Total number of Interval Too Brief errors transmitted. Type: Counter	Int64
blierrrx	Total number of Bad Location Information errors received. Type: Counter	Int64
blierrtx	Total number of Bad Location Information errors transmitted. Type: Counter	Int64
tnaerrrx	Total number of TempNotAvailable errors received. Type: Counter	Int64
tnaerrtx	Total number of TempNotAvailable errors transmitted. Type: Counter	Int64
tdnerrrx	Total number of Transaction Does Not Exist errors received. Type: Counter	Int64
tdnerrrtx	Total number of Transaction Does Not Exist errors transmitted. Type: Counter	Int64
ldterrrx	Total number of LoopDetected errors received. Type: Counter	Int64
ldterrrtx	Total number of LoopDetected errors transmitted. Type: Counter	Int64
tmherrrx	Total number of TooManyHops errors received. Type: Counter	Int64
tmherrrtx	Total number of TooManyHops errors transmitted. Type: Counter	Int64
adierrrx	Total number of AddrIncomplete errors received. Type: Counter	Int64
adierrtx	Total number of AddrIncomplete errors transmitted. Type: Counter	Int64
amberrrx	Total number of Ambiguous errors received. Type: Counter	Int64
amberrtx	Total number of Ambiguous errors transmitted. Type: Counter	Int64

Variables	Description	Data Type
bhrrrrrx	Total number of BusyHere errors received. Type: Counter	Int64
bhrrrrtx	Total number of BusyHere errors transmitted. Type: Counter	Int64
rqcrrrx	Total number of RequestCancel errors received. Type: Counter	Int64
rqcrrtx	Total number of RequestCancel errors transmitted. Type: Counter	Int64
namerrrx	Total number of NotAcceptableMedia errors received. Type: Counter	Int64
namerrtx	Total number of NotAcceptableMedia errors transmitted. Type: Counter	Int64
beerrrx	Total number of Bad Event errors received. Type: Counter	Int64
beerrtx	Total number of Bad Event errors transmitted. Type: Counter	Int64
trperrrx	Total number of Request Pending errors received. Type: Counter	Int64
trperrtx	Total number of Request Pending errors transmitted. Type: Counter	Int64
udperrrx	Total number of Undecipherable errors received. Type: Counter	Int64
udperrtx	Total number of Undecipherable errors transmitted. Type: Counter	Int64
sarerrrx	Total number of sec-agree Required Errors received. Type: Counter	Int64
sarerrtx	Total number of Sec-agree Required Errors transmitted. Type: Counter	Int64
ineerrrx	Total number of InternalError errors received. Type: Counter	Int64
ineerrtx	Total number of InternalError errors transmitted. Type: Counter	Int64
nimerrrx	Total number of NotImplemented errors received. Type: Counter	Int64
nimerrtx	Total number of NotImplemented errors transmitted. Type: Counter	Int64
bgterrxx	Total number of BadGateway errors received. Type: Counter	Int64

Variables	Description	Data Type
bgterrxx	Total number of BadGateway errors transmitted. Type: Counter	Int64
suaerrrx	Total number of ServiceUnavailable errors received. Type: Counter	Int64
suaerrtx	Total number of ServiceUnavailable errors transmitted. Type: Counter	Int64
gtterrxx	Total number of GatewayTimeout errors received. Type: Counter	Int64
gtterrtx	Total number of GatewayTimeout errors transmitted. Type: Counter	Int64
bsverrrx	Total number of BadSipVersion errors received. Type: Counter	Int64
bsverrtx	Total number of BadSipVersion errors transmitted. Type: Counter	Int64
mtlerrrx	Total number of Message Too Large errors received. Type: Counter	Int64
mtlerrtx	Total number of Message Too Large errors transmitted. Type: Counter	Int64
pcferrrx	Total number of Precondition Failure errors received. Type: Counter	Int64
pcferrtx	Total number of Precondition Failure errors transmitted. Type: Counter	Int64
bewerrrx	Total BusyEverywhere errors received. Total number of Type: Counter	Int64
bewerrtx	Total number of BusyEverywhere errors transmitted. Type: Counter	Int64
decerrrx	Total number of Decline errors received. Type: Counter	Int64
decerrtx	Total number of Decline errors transmitted. Type: Counter	Int64
neaerrrx	Total number of NotExistAnywhere errors received. Type: Counter	Int64
neaerrtx	Total number of NotExistAnywhere errors transmitted. Type: Counter	Int64
nac606errrx	Total number of NotAcceptable(606) errors received. Type: Counter	Int64
nac606errtx	Total number of NotAcceptable(606) errors transmitted. Type: Counter	Int64

Variables	Description	Data Type
callsetuptime	Sum of setup times – For calculating average call setup time. Type: Counter	Int64
callscounted	Total number of calls, for which setup time is added in setup times. Type: Counter	Int64
tot-sip-invalid-msgs-rx	Total number of SIP Invalid Messages received. Type: Counter	Int64
tot-sip-msgs-rx	Total number of SIP Messages received. Type: Counter	Int64
tot-sip-msgs-tx	Total number of SIP Messages transmitted. Type: Counter	Int64
tot-sip-msgs-proc	Total number of SIP Messages Processed. Type: Counter	Int64
regreqretx	Total number of REGISTER Requests Re-transmitted. Type: Counter	Int64
invreqretx	Total number of INVITE Requests Re-transmitted. Type: Counter	Int64
byereqretx	Total number of BYE Requests Re-transmitted. Type: Counter	Int64
cancreqretx	Total number of CANCEL Requests Re-transmitted. Type: Counter	Int64
ackreqretx	Total number of ACK Requests Re-transmitted. Type: Counter	Int64
notifyreqretx	Total number of NOTIFY Requests Re-transmitted. Type: Counter	Int64
publishreqretx	Total number of PUBLISH Requests Re-transmitted. Type: Counter	Int64
referreqretx	Total number of REFER Requests Re-transmitted. Type: Counter	Int64
subscribereqretx	Total number of SUBSCRIBE Requests Re-transmitted. Type: Counter	Int64
req-retx	Total number of SIP Requests Re-transmitted. Type: Counter	Int64
resp-retx	Total number of SIP Responses Re-transmitted. Type: Counter	Int64
reqresp-retx	Total number of SIP messages Re-transmitted. Type: Counter	Int64
calldur-lt-01sec	Total calls with duration less than 01 sec. Type: Counter	Int32

Variables	Description	Data Type
calldur-01to10sec	Total calls with duration between 01 and 10 seconds. Type: Counter	Int32
calldur-10to30sec	Total calls with duration between 10 and 30 seconds. Type: Counter	Int32
calldur-30to60sec	Total calls with duration between 30 and 60 seconds. Type: Counter	Int32
calldur-60to90sec	Total calls with duration between 60 and 90 seconds. Type: Counter	Int32
calldur-90to120sec	Total calls with duration between 90 and 120 seconds. Type: Counter	Int32
calldur-120to150sec	Total calls with duration between 120 and 150 seconds. Type: Counter	Int32
calldur-150to180sec	Total calls with duration between 150 and 180 seconds. Type: Counter	Int32
calldur-03to04min	Total calls with duration between 03 and 04 minutes. Type: Counter	Int32
calldur-04to05min	Total calls with duration between 04 and 05 minutes. Type: Counter	Int32
calldur-05to06min	Total calls with duration between 05 and 06 minutes. Type: Counter	Int32
calldur-06to07min	Total calls with duration between 06 and 07 minutes. Type: Counter	Int32
calldur-07to08min	Total calls with duration between 07 and 08 minutes. Type: Counter	Int32
calldur-08to09min	Total calls with duration between 08 and 09 minutes. Type: Counter	Int32
calldur-09to11min	Total calls with duration between 09 and 11 minutes. Type: Counter	Int32
calldur-11to13min	Total calls with duration between 11 and 13 minutes. Type: Counter	Int32
calldur-13to15min	Total calls with duration between 13 and 15 minutes. Type: Counter	Int32
calldur-15to17min	Total calls with duration between 15 and 17 minutes. Type: Counter	Int32
calldur-17to19min	Total calls with duration between 17 and 19 minutes. Type: Counter	Int32
calldur-19to21min	Total calls with duration between 19 and 21 minutes. Type: Counter	Int32

Variables	Description	Data Type
calldur-21to23min	Total calls with duration between 21 and 23 minutes. Type: Counter	Int32
calldur-23to25min	Total calls with duration between 23 and 25 minutes. Type: Counter	Int32
calldur-25to27min	Total calls with duration between 25 and 27 minutes. Type: Counter	Int32
calldur-27to29min	Total calls with duration between 27 and 29 minutes. Type: Counter	Int32
calldur-29to60min	Total calls with duration between 29 and 60 minutes. Type: Counter	Int32
calldur-gt-60min	Total calls with duration more than 60 minutes. Type: Counter	Int32
subsetup<200ms	Total number of subscriptions setup in less than 200 milliseconds. Type: Counter	Int32
subsetup200-400ms	Total number of subscriptions setup in 200 to 400 milliseconds. Type: Counter	Int32
subsetup400-600ms	Total number of subscriptions setup in 400 to 600 milliseconds. Type: Counter	Int32
subsetup600-800ms	Total number of subscriptions setup in 600 to 800 milliseconds. Type: Counter	Int32
subsetup800-1000ms	Total number of subscriptions setup in 800 to 1000 milliseconds. Type: Counter	Int32
subsetup1000-1200ms	Total number of subscriptions setup in 1000 to 1200 milliseconds. Type: Counter	Int32
subsetup1200-1400ms	Total number of subscriptions setup in 1200 to 1400 milliseconds. Type: Counter	Int32
subsetup1400-1600ms	Total number of subscriptions setup in 1400 to 1600 milliseconds. Type: Counter	Int32
subsetup1600-1800ms	Total number of subscriptions setup in 1600 to 1800 milliseconds. Type: Counter	Int32
subsetup1800-2000ms	Total number of subscriptions setup in 1800 to 2000 milliseconds. Type: Counter	Int32
subsetup2000-2200ms	Total number of subscriptions setup in 2000 to 2200 milliseconds. Type: Counter	Int32
subsetup2200-2400ms	Total number of subscriptions setup in 2200 to 2400 milliseconds. Type: Counter	Int32
subsetup2400-2600ms	Total number of subscriptions setup in 2400 to 2600 milliseconds. Type: Counter	Int32

Variables	Description	Data Type
subsetup2600-2800ms	Total number of subscriptions setup in 2600 to 2800 milliseconds. Type: Counter	Int32
subsetup2800-3000ms	Total number of subscriptions setup in 2800 to 3000 milliseconds. Type: Counter	Int32
subsetup3-5sec	Total number of subscriptions setup in 3 to 5 seconds. Type: Counter	Int32
subsetup5-7sec	Total number of subscriptions setup in 5 to 7 seconds. Type: Counter	Int32
subsetup7-9sec	Total number of subscriptions setup in 7 to 9 seconds. Type: Counter	Int32
subsetup9-11sec	Total number of subscriptions setup in 9 to 11 seconds. Type: Counter	Int32
subsetup11-13sec	Total number of subscriptions setup in 11 to 13 seconds. Type: Counter	Int32
subsetup13-15sec	Total number of subscriptions setup in 13 to 15 seconds. Type: Counter	Int32
subsetup15-17sec	Total number of subscriptions setup in 15 to 17 seconds. Type: Counter	Int32
subsetup17-19sec	Total number of subscriptions setup in 17 to 19 seconds. Type: Counter	Int32
subsetup19-21sec	Total number of subscriptions setup in 19 to 21 seconds. Type: Counter	Int32
subsetup>21sec	Total number of subscriptions setup in more than 21 seconds. Type: Counter	Int32
subdur<1hr	Total number of subscription duration less than 1 hour. Type: Counter	Int32
subdur1-2hr	Total number of subscription duration 1 to 2 hours. Type: Counter	Int32
subdur2-3hr	Total number of subscription duration 2 to 3 hours. Type: Counter	Int32
subdur3-4hr	Total number of subscription duration 3 to 4 hours. Type: Counter	Int32
subdur4-5hr	Total number of subscription duration 4 to 5 hours. Type: Counter	Int32
subdur5-6hr	Total number of subscription duration 5 to 6 hours. Type: Counter	Int32
subdur6-7hr	Total number of subscription duration 6 to 7 hours. Type: Counter	Int32

Variables	Description	Data Type
subdur7-8hr	Total number of subscription duration 7 to 8 hours. Type: Counter	Int32
subdur8-9hr	Total number of subscription duration 8 to 9 hours. Type: Counter	Int32
subdur9-10hr	Total number of subscription duration 9 to 10 hours. Type: Counter	Int32
subdur>10hr	Total number of subscription duration more than 10 hours. Type: Counter	Int32
curr-reg-subs	Total number of currently registered users. Type: Gauge	Int64
active-reg-subs	Total number of active registered users. Type: Gauge	Int64
curr-sigcomp-subs	Total number of currently registered SIGCOMP users. Type: Gauge	Int64
active-sigcomp-subs	Total number of active registered SIGCOMP users. Type: Gauge	Int64
curr-ipsec-subs	Total number of currently registered IPSEC users. Type: Gauge	Int64
active-ipsec-subs	Total number of active registered IPSEC users. Type: Gauge	Int64
active-voip-subs	Active registered VOIP users. Type: Gauge	Int64
curr-presence-subs	Total number of currently registered PRESENCE users. Type: Gauge	Int64
active-presence-subs	Total number of active registered PRESENCE users. Type: Gauge	Int64
active-im-subs	Total number of active registered IM users. Type: Gauge	Int64
dpeca-curr-sessions	The total number of DPECA sessions currently active. Type: Gauge	Int32
dpeca-tot-sess-init	Total number of DPECA sessions initiated by sending AAR Initial Request message. Type: Counter	Int32
dpeca-tot-sess-terminated	Total number of terminated DPECA sessions. Type: Counter	Int32
dpeca-tot-sess-failovers	Total number of peer-switches attempted. Type: Counter	Int32
dpeca-tot-sess-failover-err	Total number of peer-switches failed. Type: Counter	Int32

Variables	Description	Data Type
dpeca-tot-msg-received	Total number of messages received. Type: Counter	Int32
dpeca-tot-msg-sent	Total number of messages sent. Type: Counter	Int32
dpeca-tot-aar-sent	Total number of AAR request messages sent from DPECA module. Type: Counter	Int32
dpeca-tot-aaa-received	Total number of AAA answer messages received. Type: Counter	Int32
dpeca-tot-uncorr-aaa	Total number of Uncorrelated AAA messages. Type: Counter	Int32
dpeca-tot-uncorr-sta	Total number of Uncorrelated STA messages. Type: Counter	Int32
dpeca-tot-aari-sent	Total number of AAR Initial requests sent. Type: Counter	Int32
dpeca-tot-aaai-received	Total number of AAA answer messages received in response to the AAR-Initial requests. Type: Counter	Int32
dpeca-tot-aaai-accepted	Total number of AAA messages accepted as successful without any errors. Type: Counter	Int32
dpeca-tot-aaai-rejected	Total number of AAA messages rejected as erroneous. Type: Counter	Int32
dpeca-tot-aaai-timeout	Total number of AAA answers to Initial request timed out. Type: Counter	Int32
dpeca-tot-aaru-sent	Total number of AAR Update messages sent Type: Counter	Int32
dpeca-tot-aaau-received	Total number of AAA answer messages received in response to the AAR-Update requests. Type: Counter	Int32
dpeca-tot-aaau-timeout	Total number of AAA answers to Update request timed out. Type: Counter	Int32
dpeca-tot-str-sent	Total number of STR messages sent. Type: Counter	Int32
dpeca-tot-sta-received	Total number of STA messages received. Type: Counter	Int32
dpeca-tot-sta-timeout	Total number of STA answers timed out. Type: Counter	Int32
dpeca-tot-asr-received	Total number of ASR messages received. Type: Counter	Int32
dpeca-tot-asa-sent	Total number of ASA messages sent. Type: Counter	Int32

Variables	Description	Data Type
dpeca-tot-rar-received	Total number of RAR messages received. Type: Counter	Int32
dpeca-tot-raa-sent	Total number of RAA messages sent. Type: Counter	Int32
dpeca-tot-protocol-err	Total number of diameter protocol errors that were received from PCRF. Type: Counter	Int32
dpeca-tot-aaa-parse-err	Total number of AAA parse-errors. Type: Counter	Int32
dpeca-tot-unk-sess-req	Total number of unknown session requests. Type: Counter	Int32
dpeca-tot-unk-cmd-codes	Total number of unknown command codes (unsupported command codes). Type: Counter	Int32
dpeca-tc-logout	Total number of sessions terminated as the user logged out. Type: Counter	Int32
dpeca-tc-service-not-prov	Total number of sessions terminated as the requested service is not provided. Type: Counter	Int32
dpeca-tc-bad-ans	Total number of sessions terminated with a bad answer. Type: Counter	Int32
dpeca-tc-administrative	Total number of sessions terminated administratively. Type: Counter	Int32
dpeca-tc-link-broken	Total number of sessions terminated due to link broken. Type: Counter	Int32
dpeca-tc-auth-expired	Total number of sessions terminated due to auth-expiry. Type: Counter	Int32
dpeca-tc-user-moved	Total number of sessions terminated as the user-moved. Type: Counter	Int32
dpeca-tc-session-timeout	Total number of sessions terminated due to session timeout. Type: Counter	Int32
dpeca-auth-rejected	Total number of authorization rejected errors. Type: Counter	Int32
dpeca-other-errors	Total number of other miscellaneous DPECA errors. Type: Counter	Int32
dpeca-exp-res-invalid-service-info	Total number of answer messages received with Experimental-Result-Code as 5061 - INVALID_SERVICE_INFORMATION. Type: Counter	Int32
dpeca-exp-res-filter-restrictions	Total number of answer messages received with Experimental-Result-Code as 5062 - FILTER_RESTRICTIONS. Type: Counter	Int32

Variables	Description	Data Type
dpeca-exp-res-req-service-not-authorized	Total number of answer messages received with Experimental-Result-Code as 5063 - REQUESTED_SERVICE_NOT_AUTHORIZED. Type: Counter	Int32
dpeca-exp-res-duplicated-af-session	Total number of answer messages received with Experimental-Result-Code as 5064 - DUPLICATED_AF_SESSION. Type: Counter	Int32
dpeca-exp-res-ipcan-session-not-avail	Total number of answer messages received with Experimental-Result-Code as 5065 - IP_CAN_SESSION_NOT_AVAILABLE Type: Counter	Int32
perf-att-init-reg	Total number of initial registrations received at CSCF. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-att-init-reg-3gpp-geran	Total number of initial registrations received at CSCF with access technology 3GPP-GERAN. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-init-reg-3gpp-utran-fdd	Total number of initial registrations received at CSCF with access technology 3GPP-UTRAN-FDD. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-init-reg-3gpp2-1x	Total number of initial registrations received at CSCF with access technology 3GPP2-1X. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-init-reg-ieee-80211a	Total number of initial registrations received at CSCF with access technology IEEE-802.11a. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-init-reg-ieee-80211b	Total number of initial registrations received at CSCF with access technology IEEE-802.11b. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-init-reg-other-at	Total number of initial registrations received at CSCF for any other access technology. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-init-reg	Total number of success responses sent for initial registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-succ-init-reg-3gpp-geran	Total number of success responses sent for initial registration with access technology 3GPP-GERAN. Applicable only for P-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-succ-init-reg-3gpp- utran-fdd	Total number of success responses sent for initial registration with access technology 3GPP-UTRAN-FDD. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-init-reg-3gpp2-1x	Total number of success responses sent for initial registration with access technology 3GPP2-1X. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-init-reg-ieee- 80211a	Total number of success responses sent for initial registration with access technology IEEE-802.11a. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-init-reg-ieee- 80211b	Total number of success responses sent for initial registration with access technology IEEE-802.11b. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-init-reg-other	Total number of success responses sent for initial registration for any other access technologies. Applicable only for P-CSCF. Type: Counter	Int64
perf-fail-init-reg	Total number of failure responses sent for initial registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-init-reg-401	Total number of (401 Unauthorized) failure responses sent for initial registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-init-reg-403	Total number of (403 Forbidden) failure responses sent for initial registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-init-reg-404	Total number of (404 Not Found) failure responses sent for initial registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-init-reg-420	Total number of (420 Bad Extension) failure responses sent for initial registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-init-reg-500	Total number of (500 Internal Error) failure responses sent for initial registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-init-reg-other	Total number of other failure responses sent for initial registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-mean-init-reg-setup	Average time (in milliseconds) between the instance REGISTER is received by P-CSCF and 200 response is sent for the REGISTER. The average is reset every 10 minutes. Applicable only for P-CSCF. Type: Gauge	Int32
perf-att-rereg	Total number of refresh registrations received at CSCF. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-att-rereg-3gpp-geran	Total number of refresh registrations received at CSCF with access technology 3GPP-GERAN. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-rereg-3gpp-utran-fdd	Total number of refresh registrations received at CSCF with access technology 3GPP-UTRAN-FDD. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-rereg-3gpp2-1x	Total number of refresh registrations received at CSCF with access technology 3GPP2-1X. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-rereg-ieee-80211a	Total number of refresh registrations received at CSCF with access technology IEEE-802.11a. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-rereg-ieee-80211b	Total number of refresh registrations received at CSCF with access technology IEEE-802.11b. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-rereg-other-at	Total number of refresh registrations received at CSCF for any other access technology. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-rereg	Total number of success responses sent for refresh registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-succ-rereg-3gpp-geran	Total number of success responses sent for refresh registration with access technology 3GPP-GERAN. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-rereg-3gpp-utran-fdd	Total number of success responses sent for refresh registration with access technology 3GPP-UTRAN-FDD. Applicable only for P-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-succ-rereg-3gpp2-lx	Total number of success responses sent for refresh registration with access technology 3GPP2-1X. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-rereg-ieee-80211a	Total number of success responses sent for refresh registration with access technology IEEE-802.11a. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-rereg-ieee-80211b	Total number of success responses sent for refresh registration with access technology IEEE-802.11b. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-rereg-other	Total number of success responses sent for refresh registration for any other access technology. Applicable only for P-CSCF. Type: Counter	Int64
perf-fail-rereg	Total number of failure responses sent for refresh registration. Applicable only for P-CSCF & S-CSCF Type: Counter	Int64
perf-fail-rereg-401	Total number of (401 Unauthorized) failure responses sent for refresh registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-rereg-403	Total number of (403 Forbidden) failure responses sent for refresh registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-rereg-404	Total number of (404 Not Found) failure responses sent for refresh registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-rereg-420	Total number of (420 Bad Extension) failure responses sent for refresh registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-rereg-500	Total number of (500 Internal Error) failure responses sent for refresh registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-rereg-other	Total number of other failure responses sent for refresh registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-att-dereg-ue	Total number of de-registrations received from UE at CSCF. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-att-dereg-ue-3gpp-geran	Total number of de-registrations received from UE at CSCF with access technology 3GPP-GERAN. Applicable only for P-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-att-dereg-ue-3gpp- utran-fdd	Total number of de-registrations received from UE at CSCF with access technology 3GPP-UTRAN-FDD. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-dereg-ue-3gpp2-1x	Total number of de-registrations received from UE at CSCF with access technology 3GPP2-1X. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-dereg-ue-ieee- 802.11a	Total number of de-registrations received from UE at CSCF with access technology IEEE-802.11a. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-dereg-ue-ieee- 802.11b	Total number of de-registrations received from UE at CSCF with access technology IEEE-802.11b. Applicable only for P-CSCF. Type: Counter	Int64
perf-att-dereg-ue-other-at	Total number of de-registrations received from UE at CSCF for any other access technology. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-dereg-ue	Total number of success responses sent for de-registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-succ-dereg-ue-3gpp- geran	Total number of success responses sent for de-registration with access technology 3GPP-GERAN. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-dereg-ue-3gpp- utran-fdd	Total number of success responses sent for de-registration with access technology 3GPP-UTRAN-FDD. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-dereg-ue-3gpp2- 1x	Total number of success responses sent for de-registration with access technology 3GPP2-1X. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-dereg-ue-ieee- 802.11a	Total number of success responses sent for de-registration with access technology IEEE-802.11a. Applicable only for P-CSCF. Type: Counter	Int64
perf-succ-dereg-ue-ieee- 802.11b	Total number of success responses sent for de-registration with access technology IEEE-802.11b. Applicable only for P-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-succ-dereg-ue-other	Total number of success responses sent for de-registration for any other access technology. Applicable only for P-CSCF. Type: Counter	Int64
perf-fail-dereg-ue	Total number of failure responses sent for de-registration. Applicable only for P-CSCF & S-CSCF Type: Counter	Int64
perf-fail-dereg-ue-401	Total number of (401 Unauthorized) failure responses sent for de-registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-dereg-ue-403	Total number of (403 Forbidden) failure responses sent for de-registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-dereg-ue-404	Total number of (404 Not Found) failure responses sent for de-registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-dereg-ue-420	Total number of (420 Bad Extension) failure responses sent for de-registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-dereg-ue-500	Total number of (500 Internal Error) failure responses sent for de-registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-fail-dereg-ue-other	Total number of other failure responses sent for de-registration. Applicable only for P-CSCF & S-CSCF. Type: Counter	Int64
perf-att-dereg-hss	Total number of de-registrations initiated by HSS at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-succ-dereg-hss	Total number of success responses for de-registrations initiated by HSS at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-hss	Total number of failure responses for de-registrations initiated by HSS at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-hss-401	Total number of (401 Unauthorized) failure responses for de-registrations initiated by HSS at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-hss-403	Total number of (403 Forbidden) failure responses for de-registrations initiated by HSS at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-fail-dereg-hss-404	Total number of (404 Not Found) failure responses for de-registrations initiated by HSS at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-hss-420	Total number of (420 Bad Extension) failure responses for de-registrations initiated by HSS at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-hss-500	Total number of (500 Internal Error) failure responses for de-registrations initiated by HSS at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-hss-other	Total number of other failure responses for de-registrations initiated by HSS at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-att-dereg-serv	Total number of de-registrations initiated by Service Platform at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-succ-dereg-serv	Total number of success responses for de-registrations initiated by Service Platform at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-serv	Total number of failure responses for de-registrations initiated by Service Platform at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-serv-401	Total number of (401 Unauthorized) failure responses for de-registrations initiated by Service Platform at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-serv-403	Total number of (403 Forbidden) failure responses for de-registrations initiated by Service Platform at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-serv-404	Total number of (404 Not Found) failure responses for de-registrations initiated by Service Platform at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-serv-420	Total number of (420 Bad Extension) failure responses for de-registrations initiated by Service Platform at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-fail-dereg-serv-500	Total number of (500 Internal Error) failure responses for de-registrations initiated by Service Platform at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-dereg-serv-other	Total number of other failure responses for de-registrations initiated by Service Platform at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-att-3rdparty-reg	Total number of 3rd Party registrations initiated by S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-succ-3rdparty-reg	Total number of success responses for 3rd party registrations initiated by S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-3rdparty-reg	Total number of failure responses for 3rd party registrations initiated by S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-3rdparty-reg-401	Total number of (401 Unauthorized) failure responses for 3rd party registrations initiated by S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-3rdparty-reg-403	Total number of (403 Forbidden) failure responses for 3rd party registrations initiated by S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-3rdparty-reg-404	Total number of (404 Not Found) failure responses for 3rd party registrations initiated by S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-3rdparty-reg-420	Total number of (420 Bad Extension) failure responses for 3rd party registrations initiated by S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-3rdparty-reg-500	Total number of (500 Internal Error) failure responses for 3rd party registrations initiated by S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-3rdparty-reg-other	Total number of other failure responses for 3rd party registrations initiated by S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-att-uar	Total number of user registration status query procedures attempted at I-CSCF. Applicable only for I-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-succ-uaa	Total number of success response for user registration status queries attempted at I-CSCF. Applicable only for I-CSCF. Type: Counter	Int64
perf-fail-uaa	Total number of failure response for user registration status queries attempted at I-CSCF. Applicable only for I-CSCF. Type: Counter	Int64
perf-att-sar	Total number of S-CSCF registration/de-registration notification procedures. Applicable only for S-CSCF. Type: Counter	Int64
perf-succ-saa	Total number of success responses for S-CSCF registration/de-registration notification procedures. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-saa	Total number of failure responses for S-CSCF registration/de-registration notification procedures. Applicable only for S-CSCF. Type: Counter	Int64
perf-att-session	Total number of attempted session establishments at CSCF. Type: Counter	Int64
perf-succ-session-180	Total number of 180 responses for successful session establishments at CSCF. Type: Counter	Int64
perf-succ-session-200	Total number of 200 responses (without 180 response) for successful session establishments at CSCF. Type: Counter	Int64
perf-ans-session	Total number of 200 responses for session establishments at CSCF. Type: Counter	Int64
perf-fail-session	Total number of failure responses for session establishments at CSCF. Type: Counter	Int64
perf-att-lir	Total number of user location query procedures attempted at I-CSCF. Applicable only for I-CSCF. Type: Counter	Int64
perf-succ-lia	Total number of success responses for user location queries attempted at I-CSCF. Applicable only for I-CSCF. Type: Counter	Int64
perf-fail-lia	Total number of failure responses for user location queries attempted at I-CSCF. Applicable only for I-CSCF. Type: Counter	Int64
perf-att-session-firm-oth-domain	Total number of session establishments from users of other domains. Applicable only for I-CSCF & S-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-frbdcn-session-frm-oth-domain	Total number of forbidden sessions for session establishments from users of other domains. Applicable only for I-CSCF & S-CSCF. Type: Counter	Int64
perf-att-session-to-oth-domain	Total number of session establishments to users of other domains. Applicable only for I-CSCF & S-CSCF. Type: Counter	Int64
perf-frbdcn-session-to-oth-domain	Total number of forbidden sessions for session establishments to users of other domains. Applicable only for I-CSCF & S-CSCF. Type: Counter	Int64
perf-att-init-reg-visited	Total number of initial registrations of visiting users from other IMS network domains. Applicable only for P-CSCF. Type: Counter	Int64
perf-frbdcn-init-reg-visited	Total number of forbidden messages sent for the visiting users. Applicable only for P-CSCF. Type: Counter	Int64
perf-rmg-users-out	Total number of roaming users to other network domains. Applicable only for S-CSCF. Type: Counter	Int64
perf-att-mar	Total number of Multimedia-Authentication-Requests attempted. Applicable only for S-CSCF. Type: Counter	Int64
perf-succ-maa	Total number of successful Multimedia-Authentication-Answers received. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-maa	Total number of failure Multimedia-Authentication-Answers received. Applicable only for S-CSCF. Type: Counter	Int64
perf-att-ppr	Total number of HSS-initiated user profile updates attempted. Applicable only for S-CSCF. Type: Counter	Int64
perf-succ-ppa	Total number of success responses for HSS-initiated user profile update. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-ppa	Total number of failure responses for HSS-initiated user profile update. Applicable only for S-CSCF. Type: Counter	Int64
perf-att-subscribe	Total number of subscription procedures attempted at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-succ-subscribe	Total number of success responses for subscriptions. Applicable only for S-CSCF. Type: Counter	Int64

Variables	Description	Data Type
perf-fail-subscribe	Total number of failure responses for subscriptions. Applicable only for S-CSCF. Type: Counter	Int64
perf-att-notify	Total number of notify procedures attempted at S-CSCF. Applicable only for S-CSCF. Type: Counter	Int64
perf-succ-notify	Total number of success responses for notify. Applicable only for S-CSCF. Type: Counter	Int64
perf-fail-notify	Total number of failure responses for notify. Applicable only for S-CSCF. Type: Counter	Int64
de2a-session-init	Total number of DE2A sessions initiated by sending UDR message. Type: Counter	Int32
de2a-session-active	Total number of DE2A sessions currently active. Type: Counter	Int32
de2a-udr-sent	Total number UDR messages sent. Type: Counter	Int32
de2a-uda-received	Total number of UDA messages received Type: Counter	Int32
de2a-uda-err-3xxx	Total number of messages with protocol errors. Type: Counter	Int32
de2a-uda-parse-err	Total number of bad UDA messages received. Type: Counter	Int32
de2a-udr-err	Total number of UDR send errors. Type: Counter	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 14

CSCFINTF Schema Statistics

The CSCFINTF schema provides operational statistics that can be used for monitoring and troubleshooting the following products: SCM

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 14. Bulk Statistic Variables in the CSCFINTF Schema

Variables	Description	Data Type
vpnname	VPN Name This is a key variable. Type: Information	String

■ Common Syntax Options

Variables	Description	Data Type
vpnid	VPN ID This is a key variable. Type: Information	Int32
svcname	Service Name This is a key variable. Type: Information	String
svcid	Service ID This is a key variable. Type: Information	Int32
peer-ipaddr	Peer Ip-address Type: Information	String
peer-domain	Peer Domain Name Type: Information	String
regreqrx	Total number of Register requests received. Type: Counter	Int64
regreqtx	Total number of Register requests transmitted. Type: Counter	Int64
invreqrx	Total number of Invite requests received. Type: Counter	Int64
invreqtx	Total number of Invite requests transmitted. Type: Counter	Int64
ackreqrx	Total number of ACK requests received. Type: Counter	Int64
ackreqtx	Total number of ACK requests transmitted. Type: Counter	Int64
byereqrx	Total number of Bye requests received. Type: Counter	Int64
byereqtx	Total number of Bye requests transmitted. Type: Counter	Int64
cancreqrx	Total number of Cancel requests received. Type: Counter	Int64
cancreqtx	Total number of Cancel requests transmitted. Type: Counter	Int64
optreqrx	Total number of Options requests received. Type: Counter	Int64
optreqtx	Total number of Options requests transmitted. Type: Counter	Int64
prackreqrx	Total number of PRACK requests received. Type: Counter	Int64

Variables	Description	Data Type
prackreqtx	Total number of PRACK requests transmitted. Type: Counter	Int64
subreqrx	Total number of Subscribe requests received. Type: Counter	Int64
subreqtx	Total number of Subscribe requests transmitted. Type: Counter	Int64
notreqrx	Total number of Notify requests received. Type: Counter	Int64
notreqtx	Total number of Notify requests transmitted. Type: Counter	Int64
refreqrx	Total number of Refer requests received. Type: Counter	Int64
refreqtx	Total number of Refer requests transmitted. Type: Counter	Int64
inforeqrx	Total number of Info requests received. Type: Counter	Int64
inforeqtx	Total number of Info requests transmitted. Type: Counter	Int64
updreqrx	Total number of Update requests received. Type: Counter	Int64
updreqtx	Total number of Update requests transmitted. Type: Counter	Int64
msgreqrx	Total number of Message requests received. Type: Counter	Int64
msgreqtx	Total number of Message requests transmitted. Type: Counter	Int64
pubreqrx	Total number of Publish requests received. Type: Counter	Int64
pubreqtx	Total number of Publish requests transmitted. Type: Counter	Int64
trysprx	Total number of Trying responses received. Type: Counter	Int64
trysptx	Total number of Trying responses transmitted. Type: Counter	Int64
rngsprx	Total number of Ringing responses received. Type: Counter	Int64
rngsptx	Total number of Ringing responses transmitted. Type: Counter	Int64
fwdrsprx	Total number of Forwarded responses received. Type: Counter	Int64

Variables	Description	Data Type
fwdrsptx	Total number of Forwarded responses transmitted. Type: Counter	Int64
quersprx	Total number of Queued responses received. Type: Counter	Int64
quersptx	Total number of Queued responses transmitted. Type: Counter	Int64
prgrsprx	Total number of Progress responses received. Type: Counter	Int64
prgrsptx	Total number of Progress responses transmitted. Type: Counter	Int64
200-rsprx	Total number of 200 OK responses received. Type: Counter	Int64
200-rsptx	Total number of 200 OK responses transmitted. Type: Counter	Int64
202-rsprx	Total number of 202 Accepted responses received. Type: Counter	Int64
202-rsptx	Total number of 202 Accepted responses transmitted. Type: Counter	Int64
mchrsprx	Total number of Multiple Choices responses received. Type: Counter	Int64
mchrsptx	Total number of Multiple Choices responses transmitted. Type: Counter	Int64
mpersprx	Total number of Moved Permanently responses received. Type: Counter	Int64
mpersptx	Total number of Moved Permanently responses transmitted. Type: Counter	Int64
mtersprx	Total number of Moved Temporarily responses received. Type: Counter	Int64
mtersptx	Total number of Moved Temporarily responses transmitted. Type: Counter	Int64
upxrsprx	Total number of Use Proxy responses received. Type: Counter	Int64
upxrsptx	Total number of Use Proxy responses transmitted. Type: Counter	Int64
altrsprx	Total number of Alternative Service responses received. Type: Counter	Int64
altrsptx	Total number of Alternative Service responses transmitted. Type: Counter	Int64
brqerrrx	Total number of BadRequest errors received. Type: Counter	Int64

Variables	Description	Data Type
brqerrtx	Total number of BadRequest errors transmitted. Type: Counter	Int64
uauerrrx	Total number of Unauthorized errors received. Type: Counter	Int64
uauerrtx	Total number of Unauthorized errors transmitted. Type: Counter	Int64
prerrrx	Total number of Payment Required Errors received. Type: Counter	Int64
prerrtx	Total number of Payment Required Errors transmitted. Type: Counter	Int64
forerrrx	Total number of Forbidden errors received. Type: Counter	Int64
forerrtx	Total number of Forbidden errors transmitted. Type: Counter	Int64
nfderrrx	Total number of NotFound errors received. Type: Counter	Int64
nfderrtx	Total number of NotFound errors transmitted. Type: Counter	Int64
mnaerrrx	Total number of MethodNotAllowed errors received. Type: Counter	Int64
mnaerrtx	Total number of MethodNotAllowed errors transmitted. Type: Counter	Int64
nac406errrx	Total number of NotAcceptable(406) errors received. Type: Counter	Int64
nac406errtx	Total number of NotAcceptable(406) errors transmitted. Type: Counter	Int64
parerrrx	Total number of ProxyAuthRequired errors received. Type: Counter	Int64
parerrtx	Total number of ProxyAuthRequired errors transmitted. Type: Counter	Int64
rtoerrrx	Total number of RequestTimeout errors received. Type: Counter	Int64
rtoerrtx	Total number of RequestTimeout errors transmitted. Type: Counter	Int64
conferrrx	Total number of Conflict Errors received. Type: Counter	Int64
conferrtx	Total number of Conflict Errors transmitted. Type: Counter	Int64
lrerrrx	Total number of Length Required Errors received. Type: Counter	Int64

Variables	Description	Data Type
lrerrtx	Total number of Length Required Errors transmitted. Type: Counter	Int64
gonerrrx	Total number of Gone errors received. Type: Counter	Int64
gonerrtx	Total number of Gone errors transmitted. Type: Counter	Int64
crferrrx	Total number of ConditionalRequestFail errors received. Type: Counter	Int64
crferrtx	Total number of ConditionalRequestFail errors transmitted. Type: Counter	Int64
relerrrx	Total number of RequestEntityTooLarge errors received. Type: Counter	Int64
relerrtx	Total number of RequestEntityTooLarge errors transmitted. Type: Counter	Int64
rulerrrx	Total number of RequestURITooLong errors received. Type: Counter	Int64
rulerrtx	Total number of RequestURITooLong errors transmitted. Type: Counter	Int64
umterrrx	Total number of UnsupportedMediaType errors received. Type: Counter	Int64
umterrtx	Total number of UnsupportedMediaType errors transmitted. Type: Counter	Int64
uuserrrx	Total number of UnsupportedURI Scheme errors received. Type: Counter	Int64
uuserrtx	Total number of UnsupportedURI Scheme errors transmitted. Type: Counter	Int64
bexerrrx	Total number of BadExtension errors received. Type: Counter	Int64
bexerrtx	Total number of BadExtension errors transmitted. Type: Counter	Int64
exerrrx	Total number of Extension Required errors received. Type: Counter	Int64
exerrtx	Total number of Extension Required errors transmitted. Type: Counter	Int64
siterrrx	Total number of Session Interval Too Small errors received. Type: Counter	Int64
siterrtx	Total number of Session Interval Too Small errors transmitted. Type: Counter	Int64
itberrrx	Total number of Interval Too Brief errors received. Type: Counter	Int64

Variables	Description	Data Type
itberrtx	Total number of Interval Too Brief errors transmitted. Type: Counter	Int64
fhloerrrx	Total number of First Hop Lack Outbound errors received. Type: Counter	Int64
fhloerrtx	Total number of First Hop Lack Outbound errors transmitted. Type: Counter	Int64
blierrrx	Total number of Bad Location Information errors received. Type: Counter	Int64
blierrtx	Total number of Bad Location Information errors transmitted. Type: Counter	Int64
tnaerrrx	Total number of TempNotAvailable errors received. Type: Counter	Int64
tnaerrtx	Total number of TempNotAvailable errors transmitted. Type: Counter	Int64
tdnerrrx	Total number of Transaction Does Not Exist errors received. Type: Counter	Int64
tdnerrtx	Total number of Transaction Does Not Exist errors transmitted. Type: Counter	Int64
ldterrrx	Total number of LoopDetected errors received. Type: Counter	Int64
ldterrtx	Total number of LoopDetected errors transmitted. Type: Counter	Int64
tmherrrx	Total number of TooManyHops errors received. Type: Counter	Int64
tmherrtx	Total number of TooManyHops errors transmitted. Type: Counter	Int64
adierrrx	Total number of AddrIncomplete errors received. Type: Counter	Int64
adierrtx	Total number of AddrIncomplete errors transmitted. Type: Counter	Int64
amberrrx	Total number of Ambiguous errors received. Type: Counter	Int64
amberrtx	Total number of Ambiguous errors transmitted. Type: Counter	Int64
bhterrrx	Total number of BusyHere errors received. Type: Counter	Int64
bhterrtx	Total number of BusyHere errors transmitted. Type: Counter	Int64
rqcerrrx	Total number of RequestCancel errors received. Type: Counter	Int64

Variables	Description	Data Type
rqcerrtx	Total number of RequestCancel errors transmitted. Type: Counter	Int64
namerrrx	Total number of NotAcceptableMedia errors received. Type: Counter	Int64
namerrtx	Total number of NotAcceptableMedia errors transmitted. Type: Counter	Int64
beerrrx	Total number of BusyEverywhere errors received. Type: Counter	Int64
beerrtx	Total number of BusyEverywhere errors transmitted. Type: Counter	Int64
trperrrx	Total number of Request Pending errors received. Type: Counter	Int64
trperrtx	Total number of Request Pending errors transmitted. Type: Counter	Int64
udperrrx	Total number of Undecipherable errors received. Type: Counter	Int64
udperrtx	Total number of Undecipherable errors transmitted. Type: Counter	Int64
sarerrrx	Total number of Sec-agree Required errors received. Type: Counter	Int64
sarerrtx	Total number of Sec-agree Required errors transmitted. Type: Counter	Int64
ineerrrx	Total number of InternalError errors received. Type: Counter	Int64
ineerrtx	Total number of InternalError errors transmitted. Type: Counter	Int64
nimerrrx	Total number of NotImplemented errors received. Type: Counter	Int64
nimerrtx	Total number of NotImplemented errors transmitted. Type: Counter	Int64
bgterrrx	Total number of BadGateway errors received. Type: Counter	Int64
bgterrtx	Total number of BadGateway errors transmitted. Type: Counter	Int64
suaerrrx	Total number of ServiceUnavailable errors received. Type: Counter	Int64
suaerrtx	Total number of ServiceUnavailable errors transmitted. Type: Counter	Int64
gtterrrx	Total number of GatewayTimeout errors received. Type: Counter	Int64

Variables	Description	Data Type
gtterrtr	Total number of GatewayTimeout errors transmitted. Type: Counter	Int64
bsverrrx	Total number of BadSipVersion errors received. Type: Counter	Int64
bsverrrx	Total number of BadSipVersion errors transmitted. Type: Counter	Int64
mtlerrrx	Total number of Message Too Large errors received. Type: Counter	Int64
mtlerrtr	Total number of Message Too Large errors transmitted. Type: Counter	Int64
pcferrrx	Total number of Precondition Failure errors received. Type: Counter	Int64
pcferrtr	Total number of Precondition Failure errors transmitted. Type: Counter	Int64
bewerrrx	Total number of BusyEverywhere errors received. Type: Counter	Int64
bewerrtr	Total number of BusyEverywhere errors transmitted. Type: Counter	Int64
decerrrx	Total number of Decline errors received. Type: Counter	Int64
decerrtr	Total number of Decline errors transmitted. Type: Counter	Int64
neaerrrx	Total number of NotExistAnywhere errors received. Type: Counter	Int64
neaerrtr	Total number of NotExistAnywhere errors transmitted. Type: Counter	Int64
nac606errrx	Total number of NotAcceptable(606) errors received. Type: Counter	Int64
nac606errtr	Total number of NotAcceptable(606) errors transmitted. Type: Counter	Int64
mo-call-succ-rate	Mobile Originating calls success rate. Type: Gauge	Float
mt-call-succ-rate	Mobile Terminating calls success rate. Type: Gauge	Float
mo-voice-call-succ-rate	Mobile Originating VOICE calls success rate. Type: Gauge	Float
mt-voice-call-succ-rate	Mobile Terminating VOICE calls success rate. Type: Gauge	Float
mo-video-call-succ-rate	Mobile Originating VIDEO calls success rate. Type: Gauge	Float

■ Common Syntax Options

Variables	Description	Data Type
mt-video-call-succ-rate	Mobile Terminating VIDEO calls success rate. Type: Gauge	Float
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 15

DCCA Schema Statistics

The Diameter Credit Control Application (DCCA) schema provides operational statistics that can be used for monitoring and troubleshooting Gy interface functionality used by the following products:

- GGSN
- HA
- IPSG
- PDSN
- P-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 15. Bulk Statistic Variables in the DCCA Schema

Variables	Description	Data Type
vpnnname	Description: Name of the context facilitating the DCCA configuration. This is a key variable. Availability: Per system Type: Information	String
vpnid	Description: Identifier of the context currently facilitating the DCCA configuration. This is an internal reference number. This is a key variable. Availability: Per system Type: Information	Int32
ipaddr	Description: IP address of the server for which statistics are being collected. The IP address can be specified in IPv4 or IPv6 notation. This is a key variable. Availability: Per system Type: Information	String
port	Description: The port being used for exchange of data. This is a key variable. Availability: Per system Type: Information	Int32
ccr-inisent	Description: Total number of Credit Control Request-Initial (CCR-Initial) messages sent. Triggers: Increments when the CCR-Initial message is successfully sent from the system Availability: Per Gy server	Int32
cca-inirec	Description: Total number of Credit Control Answer-Initial (CCA-Initial) messages received. Triggers: Increments when the CCA-Initial message is successfully received Availability: Per Gy server	Int32
cca-initimeout	Description: Total number of CCA-Initial message timeouts. Triggers: Increments when the CCA-Initial message response timeout occurs Availability: Per Gy server	Int32
ccr-updsent	Description: Total number of CCR-Update messages sent. Triggers: Increments when the CCR-Update message is successfully sent from the system Availability: Per Gy server	Int32
cca-updrec	Description: Total number of CCA-Update messages received. Triggers: Increments when the CCA-Update message is successfully received Availability: Per Gy server	Int32
cca-updtimeout	Description: Total number of CCA-Update message timeouts. Triggers: Increments when the CCA-Update message response timeout occurs Availability: Per Gy server	Int32
ccr-tersent	Description: Total number of CCR-Terminate messages sent. Triggers: Increments when the CCR-Terminate message is successfully sent from the system Availability: Per Gy server	Int32

Variables	Description	Data Type
cca-terrec	Description: Total number of CCA-Terminate messages received. Triggers: Increments when the CCA-Terminate message is successfully received Availability: Per Gy server	Int32
cca-tertimeout	Description: Total number of CCA-Terminate message timeouts. Triggers: Increments when the CCA-Terminate message response timeout occurs Availability: Per Gy server	Int32
reauth-anssent	Description: Total number of Re-Authorization Answer messages sent. Triggers: Increments when the RAA message is successfully sent from the system Availability: Per Gy server	Int32
reauth-reqrec	Description: Total number of Re-Authorization Request messages received. Triggers: Increments when the RAR message is received Availability: Per Gy server	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 16

Diameter Accounting Schema Statistics

The Diameter Accounting schema provides operational statistics that can be used for monitoring and troubleshooting Rf interface functionality used by the following products:

- GGSN
- HSGW
- P-GW
- SCM

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 16. Bulk Statistic Variables in the Diameter Accounting Schema

Variables	Description	Data Type
vpnid	Description: The identification number of the context currently facilitating Diameter Accounting configuration. This is a key variable. Triggers: This statistics is updated whenever a new VPN is configured. Availability: Per system Type: Information	Int32
vpnname	Description: The name of the context currently facilitating Diameter Accounting configuration. This is a key variable. Triggers: This statistics is updated whenever a new VPN is configured. Availability: Per system Type: Information	String
ipaddr	Description: IP address of the server for which statistics are being collected. The IP address can be specified in IPv4 or IPv6 notation. This is a key variable. Triggers: This statistics is updated whenever a new Authentication Server is configured. Availability: Per system Type: Information	String
port	Description: The server port being used for exchange of data. This is a key variable. Triggers: This statistics is updated whenever a new Authentication Server is configured. Availability: Per system Type: Information	Int32
servertype	Description: The type of server for which statistics are being collected. Triggers: This statistics is updated whenever a new Authentication Server is configured. Availability: Per system Type: Information	String
group	Description: The name of the AAA Server Group. Triggers: This statistics is updated whenever a new AAA Server group is configured. Availability: Per system Type: Information	String
req-sent	Description: The total number of Accounting Request messages sent. Triggers: Increments when a ACR is sent Availability: Per AAAMgr instance	Int32
req-retried	Description: The total number of Accounting Requests retried. Triggers: Increments when a ACR is retried Availability: Per AAAMgr instance	Int32
rsp-rcvd	Description: The total number of Accounting Responses received. Triggers: Increments when a ACA is received Availability: Per AAAMgr instance	Int32
req-timeout	Description: The total number of Accounting Requests timed out. Triggers: Increments when a ACR is timed out Availability: Per AAAMgr instance	Int32

Variables	Description	Data Type
rsp-bad-resp	Description: The total number of bad response messages received. Triggers: Increments when a ACA is received with wrong AVPs Availability: Per AAAMgr instance	Int32
rsp-malformed	Description: The total number of malformed messages received. Triggers: Increments when a ACA is received with malformed AVPs Availability: Per AAAMgr instance	Int32
rsp-dropped	Description: The total number of dropped messages received. Triggers: Increments when a ACA is dropped Availability: Per AAAMgr instance	Int32
start-sent	Description: The total number of Accounting Start messages sent. Triggers: Increments when a ACR-START is sent Availability: Per AAAMgr instance	Int32
stop-sent	Description: The total number of Accounting Stop messages sent. Triggers: Increments when a ACR-STOP is sent Availability: Per AAAMgr instance	Int32
interim-sent	Description: The total number of Accounting Interim messages sent. Triggers: Increments when a ACR-INTERIM is sent Availability: Per AAAMgr instance	Int32
start-retries	Description: The total number of retries for Accounting Start messages. Triggers: Increments when a ACR-START is retried Availability: Per AAAMgr instance	Int32
stop-retries	Description: The total number of retries for Accounting Stop messages. Triggers: Increments when a ACR-STOP is retried Availability: Per AAAMgr instance	Int32
interim-retries	Description: The total number of retries for Accounting Interim messages. Triggers: Increments when a ACR-INTERIM is retried Availability: Per AAAMgr instance	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 17

Diameter Authentication Schema Statistics

The Diameter Authentication schema provides operational statistics that can be used for monitoring and troubleshooting Diameter authentication functionality for STa, S6b, EAP, and so on used the following products:

- GGSN
- HSGW
- P-GW
- SCM

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 17. Bulk Statistic Variables in the Diameter Authentication Schema

Variables	Description	Data Type
vpnid	Description: The identification number of the context currently facilitating Diameter Authentication configuration. This is a key variable. Triggers: This statistics is updated whenever a new VPN is configured. Availability: Per system Type: Information	Int32
vpnname	Description: The name of the context currently facilitating Diameter Authentication configuration. This is a key variable. Triggers: This statistics is updated whenever a new VPN is configured. Availability: Per system Type: Information	String
ipaddr	Description: The IP address of the server for which statistics are being collected. The IP address can be specified in IPv4 or IPv6 notation. This is a key variable. Triggers: This statistics is updated whenever a new Authentication Server is configured. Availability: Per system Type: Information	String
port	Description: The server port being used for exchange of data. This is a key variable. Triggers: This statistics is updated whenever a new Authentication Server is configured. Availability: Per system Type: Information	Int32
servertype	Description: The type of server for which statistics are being collected. Triggers: This statistics is updated whenever a new Authentication Server is configured. Availability: Per system Type: Information	String
group	Description: The name of the AAA Server Group. Triggers: This statistics is updated whenever a new AAA Server group is configured. Availability: Per system Type: Information	String
der-req-id-sent	Description: The total number of Diameter-EAP-Request (DER) messages sent. Triggers: Increments when a DER message is sent Availability: Per AAAMgr instance	Int32
der-req-aka-chal-sent	Description: The total number of DER-request-AKA-CHALLENGE messages sent. Triggers: Increments when a DER message is sent with AKA-Challenge Availability: Per AAAMgr instance	Int32
der-req-retried	Description: The total number of retries for DER messages. Triggers: Increments when a DER message is retried Availability: Per AAAMgr instance	Int32
dea-chal-rcvd	Description: The total number of DEA Challenge messages received. Triggers: Increments when a DEA message is received with EAP-Challenge Availability: Per AAAMgr instance	Int32

Variables	Description	Data Type
dea-acpt-rcvd	Description: The total number of DEA Accept messages received. Triggers: Increments when a DEA is received with Result-Code value as 2001 Availability: Per AAAMgr instance	Int32
dea-timeout	Description: The total number of DEA timeout messages. Triggers: Increments when a DEA is timed out Availability: Per AAAMgr instance	Int32
dea-badauth	Description: The total number of DEA Bad-Authentication messages. Triggers: Increments when a DEA is received with malformed or wrong AVPs Availability: Per AAAMgr instance	Int32
dea-malformed	Description: The total number of DEA Malformed messages. Triggers: Increments when a DEA is received with malformed version, length, or command-code, etc. Availability: Per AAAMgr instance	Int32
dea-malformed-avp	Description: The total number of DEA Malformed AVP messages. Triggers: Increments when a DEA is received with malformed AVP Availability: Per AAAMgr instance	Int32
dea-dropped	Description: The total number of dropped DEA messages. Triggers: Increments when a DEA is dropped Availability: Per AAAMgr instance	Int32
rar-req-rcvd	Description: The total number of Re-Auth-Request (RAR) messages received. Triggers: Increments when a RAR is received Availability: Per AAAMgr instance	Int32
raa-ans-accpt-sent	Description: The total number of Re-Auth-Answer (RAA) messages sent. Triggers: Increments when a RAA is sent Availability: Per AAAMgr instance	Int32
aar-req-sent	Description: The total number of AAR messages sent. Triggers: Increments when a AAR is sent Availability: Per AAAMgr instance	Int32
str-req-sent	Description: The total number of STR requests sent. Triggers: Increments when a STR is sent Availability: Per AAAMgr instance	Int32
str-req-retried	Description: The total number of retries for STR messages. Triggers: Increments when a STR is retried Availability: Per AAAMgr instance	Int32
sta-ans-accpt-rcvd	Description: The total number of received STA messages. Triggers: Increments when a STA is received Availability: Per AAAMgr instance	Int32
asr-req-rcvd	Description: The total number of ASR requests received. Triggers: Increments when a ASR is received Availability: Per AAAMgr instance	Int32

■ Common Syntax Options

Variables	Description	Data Type
asa-rsp-accpt-sent	Description: The total number of ASA Messages sent. Triggers: Increments when a ASA is sent Availability: Per AAAMgr instance	Int32
asa-rsp-rej-sent	Description: Total number of Abort-Session-Response sent with error Result-Code. Triggers: Increments when ASA is sent with failure result-code Availability: Per AAAMgr instance	Int32
req-sock-write-err	Description: Total number of socket write failed for Diameter requests. Triggers: Increments when write failure is returned from socket for a Diameter request. Availability: Per Diameter TCP/SCTP connection	Int32
rsp-sock-write-err	Description: Total number of socket write failed for Diameter responses. Triggers: Increments when write failure is returned from socket for a Diameter response. Availability: Per Diameter TCP/SCTP connection	Int32
any-sock-read-err	Description: Total number of socket read failed for Diameter messages. Triggers: Increments when read failure is returned from socket for a Diameter message. Availability: Per Diameter TCP/SCTP connection	Int32
rem-disconnect	Description: Total number of TCP/SCTP connections disconnected from remote peer. Triggers: Increments when a connection is disconnected from a remote peer. Availability: Per Diameter TCP/SCTP connection	Int32
loc-disconnect	Description: Total number of TCP/SCTP connections disconnected locally. Triggers: Increments when a connection is disconnected locally. Availability: Per Diameter TCP/SCTP connection	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 18

DLCI-Util Schema Statistics

This schema provides DLCI (data link connection) utilization statistics that can be used for monitoring and troubleshooting the following products: SGSN with CLC-type line cards

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 18. Bulk Statistic Variables in the DLCI-Util Schema

Variables	Description	Data Type

Variables	Description	Data Type
card	Description: Identifies the card for which statistics are being collected. The ID is based on the chassis slot number (17-48) where the channelized line card (CLC2) resides. This is a key variable. Triggers: N/A Availability: N/A Type: Information	Int32
port	Description: Identifies the port number (1 - 4) for which the statistics are being collected and displayed. This is a key variable. Triggers: N/A Availability: N/A Type: Information	Int32
dlci_util_path	Description: Identifies a logical Frame Relay path associated with the port. Valid range is 1 to 3. Triggers: N/A Availability: N/A Type: Gauge	Int32
dlci_util_dsle1	Description: Identifies the type of connection, E1 or T1, associated with this path. Triggers: N/A Availability: N/A Type: Gauge	Int32
dlci_util_timeslot	Description: Identifies the timeslot configured for this E1/T1 connection. Triggers: N/A Availability: N/A Type: Gauge	Int32
dlci_util_dlci_no	Description: Indicates a specific data link connection identifier (DLCI) for which the utilization information will be displayed. Triggers: N/A Availability: N/A Type: Gauge	Int32
dlci_util_nsvc	Description: Identifies a specific network service virtual circuit (NSVC) associated with the DLCI. Triggers: N/A Availability: N/A Type: Gauge	Int32
dlci_util_nse	Description: Identifies the specific network service entity (NSE) associated with the DLCI. Triggers: N/A Availability: N/A Type: Gauge	Int32
dlci_util_dlci_curr_rx	Description: Indicates the current average number of kbps of received traffic via the DLCI. Triggers: Collects the Rx byte statistic when a message is received. Availability: per CLC2 Type: Gauge	Int64

Variables	Description	Data Type
dlci_util_dlci_curr_tx	Description: Indicates the current average number of kbps of transmitted traffic via the DLCI. Triggers: Collects the Tx byte statistic when a message is transmitted. Availability: per CLC2 Type: Gauge	Int64
dlci_util_dlci_5min_rx	Description: Indicates the average number of kbps of received traffic via the DLCI in a 5 minute period. Triggers: N/A Availability: per CLC2 Type: Gauge	Int64
dlci_util_dlci_5min_tx	Description: This gauge indicates the average number of kbps of transmitted traffic via the DLCI in a 5 minute period. Triggers: N/A Availability: per CLC2 Type: Gauge	Int64
dlci_util_dlci_15min_rx	Description: This gauge indicates the average number of kbps of received traffic via the DLCI in a 15 minute period. Triggers: N/A Availability: per CLC2 Type: Gauge	Int64
dlci_util_dlci_15min_tx	Description: This gauge indicates the average number of kbps of transmitted traffic via the DLCI in a 15 minute period. Triggers: N/A Availability: per CLC2 Type: Gauge	Int64



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 19

DPCA Schema Statistics

The Diameter Policy Control Application (DPCA) schema provides operational statistics that can be used for monitoring and troubleshooting Gx interface functionality used by the following products:

- GGSN
- HA
- HSGW
- IPSG
- PDSN
- P-GW
- S-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 19. Bulk Statistic Variables in the DPCA Schema

Variables	Description	Data Type
vpnnname	Description: Name of the context facilitating the DPCA configuration. This is a key variable. Availability: Per system Type: Information	String
vpnid	Description: The identifier of the context currently facilitating the DPCA configuration. This is an internal reference number. This is a key variable. Availability: Per system Type: Information	Int32
ipaddr	Description: IP address of the server for which statistics are being collected. The IP address can be specified in IPv4 or IPv6 notation. This is a key variable. Availability: Per system Type: Information	String
port	Description: The port being used for exchange of data. This is a key variable. Availability: Per system Type: Information	Int32
ccr-inisent	Description: Total number of Credit Control Request-Initial (CCR-Initial) messages sent. Triggers: Increments when CCR-I message is sent Availability: Per IMS authorization service	Int32
cca-inirec	Description: Total number of Credit Control Answer-Initial (CCA-Initial) messages received. Triggers: Increments when CCA-I message is received Availability: Per IMS authorization service	Int32
ccr-initimeout	Description: Total number of CCR-Initial message timeouts. Triggers: Increments when there is a Tx timeout in CCR-I message Availability: Per IMS authorization service	Int32
ccr-updsent	Description: Total number of CCR-Update messages sent. Triggers: Increments when a CCR-U message is sent Availability: Per IMS authorization service	Int32
cca-updrec	Description: Total number of CCA-Update messages received. Triggers: Increments when a CCA-U message is received Availability: Per IMS authorization service	Int32
ccr-updtimeout	Description: Total number of CCR-Update message timeouts. Triggers: Increments when there is a Tx timeout in CCR-U message Availability: Per IMS authorization service	Int32
ccr-tersent	Description: Total number of CCR-Terminate messages sent. Triggers: Increments when a CCR-T message is sent Availability: Per IMS authorization service	Int32

Variables	Description	Data Type
cca-terrec	Description: Total number of CCA-Terminate messages received. Triggers: Increments when a CCA-T message is received Availability: Per IMS authorization service	Int32
ccr-tertimeout	Description: Total number of CCR-Terminate message timeouts. Triggers: Increments when there is a Tx timeout in CCR-T message Availability: Per IMS authorization service	Int32
reauth-anssent	Description: Total number of Re-Authorization Answer messages sent. Triggers: Increments when a RAA message is sent Availability: Per IMS authorization service	Int32
reauth-reqrec	Description: Total number of Re-authorization Request messages received. Triggers: Increments when a RAR message is received Availability: Per IMS authorization service	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 20

ECS Schema Statistics

The ECS schema provides operational statistics that can be used for monitoring and troubleshooting Enhanced Charging functionality for the following products: GGSN, HA, HSGW, MVG, PDSN, P-GW, and ADC, CF, SFW, NAT, and TPO In-line services

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 20. Bulk Statistic Variables in the ECS Schema

Variables	Description	Data Type
General ECS Statistics		

Variables	Description	Data Type
ecs-subscribers	Description: The combined total of the number of subscribers who have used the ECS service previously + other subscribers currently using the ECS service. Triggers: Increments whenever a new subscriber comes up. Availability: Per Active Charging Service.	Int32
ecs-subscribers-cur	Description: The number of subscribers currently using the ECS service. Triggers: Increments whenever a new subscriber comes up. Decrements whenever a subscriber drops. Availability: Per Active Charging Service. Type: Gauge	Int32
gcdrs-generated	Description: The total number of G-CDRs generated by ECS. Triggers: Increments whenever a G-CDR is generated. Availability: Per Active Charging Service.	Int32
edrs-generated	Description: The total number of EDRs generated by ECS. Triggers: Increments whenever an EDR is generated. Availability: Per Active Charging Service.	Int32
udrs-generated	Description: The total number of UDRs generated by ECS. Triggers: Increments whenever an UDR is generated. Availability: Per Active Charging Service.	Int32
IP Analyzer Specific Statistics		
ip-flows	Description: The combined total of the number of IP flows previously analyzed + IP flows currently being analyzed. Triggers: Increments whenever a new IP flow is created. Availability: Per Active Charging Service.	Int64
ip-flows-cur	Description: The number of IP flows currently being analyzed. Triggers: Increments whenever a new IP flow is created. Decrements whenever an IP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int64
ip-uplk-bytes	Description: The total number of IP bytes detected in uplink direction (from the MS). Triggers: Increments whenever a new packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
ip-dwnlk-bytes	Description: The total number of IP bytes detected in downlink direction (to the MS). Triggers: Increments whenever a new packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
ip-uplk-pkts	Description: The total number of IP packets detected in uplink direction. Triggers: Increments whenever a new packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
ip-dwnlk-pkts	Description: The total number of IP packets detected in downlink direction. Triggers: Increments whenever a new packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
ip-uplk-pkts-frag	Description: The total number of fragmented IP packets detected in uplink direction. Triggers: Increments whenever a new fragment packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
ip-dwnlk-pkts-frag	Description: The total number of fragmented IP packets detected in downlink direction. Triggers: Increments whenever a new fragment packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
ip-uplk-bytes-frag	Description: The total number of fragmented IP bytes detected in uplink direction. Triggers: Increments whenever a new fragment packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
ip-dwnlk-bytes-frag	Description: The total number of fragmented IP bytes detected in downlink direction. Triggers: Increments whenever a new fragment packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
UDP Analyzer Specific Statistics		
udp-flows	Description: The combined total of the number of UDP flows previously analyzed + UDP flows currently being analyzed. Triggers: Increments whenever a new UDP flow is created. Availability: Per Active Charging Service.	Int32
udp-flows-cur	Description: The number of UDP flows currently being analyzed. Triggers: Increments whenever a new UDP flow is created. Decrements whenever an UDP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
udp-uplk-bytes	Description: The total number of UDP bytes detected in uplink direction (from the MS). Triggers: Increments whenever a new UDP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
udp-dwnlk-bytes	Description: The total number of UDP bytes detected in downlink direction (to the MS). Triggers: Increments whenever a new UDP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
udp-uplk-pkts	Description: The total number of UDP packets detected in uplink direction. Triggers: Increments whenever a new UDP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
udp-dwnlk-pkts	Description: The total number of UDP packets detected in downlink direction. Triggers: Increments whenever a new UDP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
udp-inv-pkts	Description: The total number of invalid UDP packets detected. Triggers: Increments whenever an invalid UDP packet is detected. Availability: Per Active Charging Service.	Int32
TCP Analyzer Specific Statistics		
tcp-flows	Description: The combined total of the number of TCP flows previously analyzed + TCP flows currently being analyzed. Triggers: Increments whenever a new TCP flow is created. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
tcp-flows-cur	Description: The number of TCP flows currently being analyzed. Triggers: Increments whenever a new TCP flow is created. Decrements whenever a TCP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
tcp-uplk-bytes	Description: The total number of TCP bytes detected in uplink direction (from the MS). Triggers: Increments whenever a new TCP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
tcp-dwnlk-bytes	Description: The total number of TCP bytes detected in downlink direction (to the MS). Triggers: Increments whenever a new TCP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
tcp-uplk-pkts	Description: The total number of TCP packets detected in uplink direction. Triggers: Increments whenever a new TCP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
tcp-dwnlk-pkts	Description: The total number of TCP packets detected in downlink direction. Triggers: Increments whenever a new TCP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
tcp-uplk-bytes-retr	Description: The total number of TCP bytes retransmitted in uplink direction. Triggers: Increments whenever a new TCP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
tcp-dwnlk-bytes-retr	Description: The total number of TCP bytes retransmitted in downlink direction. Triggers: Increments whenever a new TCP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
tcp-uplk-pkts-retr	Description: The total number of TCP packets retransmitted in uplink direction. Triggers: Increments whenever a new TCP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
tcp-dwnlk-pkts-retr	Description: The total number of TCP packets retransmitted in downlink direction. Triggers: Increments whenever a new TCP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
tcp-uplk-pkts-ooo-analyzd	Description: The total number of out-of-order TCP packets analyzed in uplink direction. Triggers: Increments whenever a new TCP out-of-order packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
tcp-dwnlk-pkts-ooo-analyzd	Description: The total number of out-of-order TCP packets analyzed in downlink direction. Triggers: Increments whenever a new TCP out-of-order packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
tcp-uplk-pkts-ooo-fail	Description: The total number of failed out-of-order TCP packets detected in uplink direction. Triggers: Increments whenever TCP out-of-order failure occurs for uplink direction. It gets incremented by the total number of uplink out-of-order packets. Availability: Per Active Charging Service.	Int32
tcp-dwnlk-pkts-ooo-fail	Description: The total number of failed out-of-order TCP packets detected in downlink direction. Triggers: Increments whenever TCP out-of-order failure occurs for downlink direction. It gets incremented by the total number of downlink out-of-order packets. Availability: Per Active Charging Service.	Int32
tcp-uplk-pkts-ooo-retr	Description: The total number of out-of-order TCP packets retransmitted in uplink direction. Triggers: Increments whenever a new TCP retransmitted out-of-order packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
tcp-dwnlk-pkts-ooo-retr	Description: The total number of out-of-order TCP packets retransmitted in downlink direction. Triggers: Increments whenever a new TCP retransmitted out-of-order packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
ICMP Analyzer Specific Statistics		
icmp-flows	Description: The combined total of the number of ICMP flows previously analyzed + ICMP flows currently being analyzed. Triggers: Increments whenever a new ICMP flow is created. Availability: Per Active Charging Service.	Int32
icmp-flows-cur	Description: The number of ICMP flows currently being analyzed. Triggers: Increments whenever a new ICMP flow is created. Decrements whenever an ICMP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
icmp-uplk-bytes	Description: The total number of ICMP bytes detected in uplink direction (from the MS). Triggers: Increments whenever a new ICMP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
icmp-dwnlk-bytes	Description: The total number of ICMP bytes detected in downlink direction (to the MS). Triggers: Increments whenever a new ICMP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
icmp-uplk-pkts	Description: The total number of ICMP packets detected in uplink direction. Triggers: Increments whenever a new ICMP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
icmp-dwnlk-pkts	Description: The total number of ICMP packets detected in downlink direction. Triggers: Increments whenever a new ICMP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
icmp-ech-req	Description: The total number of ICMP ECHO requests detected. Triggers: Increments whenever a new ICMP ECHO request is received. Availability: Per Active Charging Service.	Int32
icmp-ech-rep	Description: The total number of ICMP ECHO replies detected. Triggers: Increments whenever a new ICMP ECHO response is received. Availability: Per Active Charging Service.	Int32
icmp-dst-unrch	Description: The total number of ICMP Destination Unreachable messages detected. Triggers: Increments whenever a new ICMP Destination Unreachable message is received. Availability: Per Active Charging Service.	Int32
icmp-redir	Description: The total number of ICMP Redirect messages detected. Triggers: Increments whenever a new ICMP Redirect message is received. Availability: Per Active Charging Service.	Int32
icmp-tm-excd	Description: The total number of ICMP Time Exceeded messages detected. Triggers: Increments whenever a new ICMP time exceeded message is received. Availability: Per Active Charging Service.	Int32
icmp-trace-route	Description: The total number of ICMP Trace Route messages detected. Triggers: Increments whenever a new ICMP Trace Route message is received. Availability: Per Active Charging Service.	Int32
icmp-oth	Description: The total number of other ICMP messages detected. Triggers: Increments whenever any other ICMP message is received. Availability: Per Active Charging Service.	Int32
icmp-inv-pkts	Description: The total number of ICMP invalid packets detected. Triggers: Increments whenever an invalid ICMP packet is detected. Availability: Per Active Charging Service.	Int32
HTTP Analyzer Specific Statistics		
http-flows	Description: The combined total of the number of HTTP flows previously analyzed + HTTP flows currently being analyzed. Triggers: Increments whenever a new HTTP flow is created. Availability: Per Active Charging Service.	Int32
http-flows-cur	Description: The number of HTTP flows currently being analyzed. Triggers: Increments whenever a new HTTP flow is created. Decrements whenever an HTTP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
http-uplk-bytes	Description: The total number of HTTP bytes detected in uplink direction (from the MS). Triggers: Increments whenever a new HTTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
http-dwnlk-bytes	Description: The total number of HTTP bytes detected in downlink direction (to the MS). Triggers: Increments whenever a new HTTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
http-uplk-pkts	Description: The total number of HTTP packets detected in uplink direction. Triggers: Increments whenever a new HTTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
http-dwnlk-pkts	Description: The total number of HTTP packets detected in downlink direction. Triggers: Increments whenever a new HTTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
http-uplk-bytes-retr	Description: The total number of HTTP bytes retransmitted in uplink direction. Triggers: Increments whenever a new HTTP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
http-dwnlk-bytes-retr	Description: The total number of HTTP bytes retransmitted in downlink direction. Triggers: Increments whenever a new HTTP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
http-uplk-pkts-retr	Description: The total number of HTTP packets retransmitted in uplink direction. Triggers: Increments whenever a new HTTP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
http-dwnlk-pkts-retr	Description: The total number of HTTP packets retransmitted in downlink direction. Triggers: Increments whenever a new HTTP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
http-req-succ	Description: The total number of successful HTTP requests detected. Triggers: Increments whenever a new HTTP request completes successfully. Availability: Per Active Charging Service.	Int32
http-req-fail	Description: The total number of failed HTTP requests detected. Triggers: Increments whenever a new HTTP request fails. Availability: Per Active Charging Service.	Int32
http-get-req	Description: The total number of HTTP GET requests detected. Triggers: Increments whenever a new HTTP GET request is received. Availability: Per Active Charging Service.	Int32
http-post-req	Description: The total number of HTTP POST requests detected. Triggers: Increments whenever a new HTTP POST request is received. Availability: Per Active Charging Service.	Int32
http-connect-req	Description: The total number of HTTP CONNECT requests detected. Triggers: Increments whenever a new HTTP CONNECT request is received. Availability: Per Active Charging Service.	Int32
http-inv-pkts	Description: The total number of invalid HTTP packets detected. Triggers: Increments whenever an invalid HTTP packet is detected. Availability: Per Active Charging Service.	Int32
HTTPS Analyzer Specific Statistics		

Variables	Description	Data Type
https-flows	Description: The combined total of the number of HTTPS flows previously analyzed + HTTPS flows currently being analyzed. Triggers: Increments whenever a new HTTPS flow is created. Availability: Per Active Charging Service.	Int32
https-flows-cur	Description: The number of HTTPS flows currently being analyzed. Triggers: Increments whenever a new HTTPS flow is created. Decrements whenever an HTTPS flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
https-uplk-bytes	Description: The total number of HTTPS bytes detected in uplink direction (from the MS). Triggers: Increments whenever a new HTTPS packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
https-dwnlk-bytes	Description: The total number of HTTPS bytes detected in downlink direction (to the MS). Triggers: Increments whenever a new HTTPS packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
https-uplk-pkts	Description: The total number of HTTPS packets detected in uplink direction. Triggers: Increments whenever a new HTTPS packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
https-dwnlk-pkts	Description: The total number of HTTPS packets detected in downlink direction. Triggers: Increments whenever a new HTTPS packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
https-uplk-bytes-retr	Description: The total number of HTTPS bytes retransmitted in uplink direction. Triggers: Increments whenever a new HTTPS retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
https-dwnlk-bytes-retr	Description: The total number of HTTPS bytes retransmitted in downlink direction. Triggers: Increments whenever a new HTTPS retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
https-uplk-pkts-retr	Description: The total number of HTTPS packets retransmitted in uplink direction. Triggers: Increments whenever a new HTTPS retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
https-dwnlk-pkts-retr	Description: The total number of HTTPS packets retransmitted in downlink direction. Triggers: Increments whenever a new HTTPS retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
WTP Analyzer Specific Statistics		
wtp-trans	Description: The total number of WTP transactions detected. Triggers: Increments whenever a new WTP transaction is created. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
wtp-cls-zero	Description: The total number of WTP Class 0 transactions detected. Triggers: Increments whenever a new WTP Class 0 transaction is created. Availability: Per Active Charging Service.	Int32
wtp-cls-one	Description: The total number of WTP Class 1 transactions detected. Triggers: Increments whenever a new WTP Class 1 transaction is created. Availability: Per Active Charging Service.	Int32
wtp-cls-two	Description: The total number of WTP Class 2 transactions detected. Triggers: Increments whenever a new WTP Class 2 transaction is created. Availability: Per Active Charging Service.	Int32
wtp-uplk-bytes	Description: The total number of WTP bytes detected in uplink direction (from the MS). Triggers: Increments whenever a new WTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
wtp-dwnlk-bytes	Description: The total number of WTP bytes detected in downlink direction (to the MS). Triggers: Increments whenever a new WTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
wtp-uplk-pkts	Description: The total number of WTP packets detected in uplink direction. Triggers: Increments whenever a new WTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
wtp-dwnlk-pkts	Description: The total number of WTP packets detected in downlink direction. Triggers: Increments whenever a new WTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
wtp-uplk-bytes-retr	Description: The total number of WTP bytes retransmitted in uplink direction. Triggers: Increments whenever an uplink WTP retransmitted packet is detected. Availability: Per Active Charging Service.	Int32
wtp-dwnlk-bytes-retr	Description: The total number of WTP bytes retransmitted in downlink direction. Triggers: Increments whenever a downlink WTP retransmitted packet is detected. Availability: Per Active Charging Service.	Int32
wtp-uplk-pkts-retr	Description: The total number of WTP packets retransmitted in uplink direction. Triggers: Increments whenever an uplink WTP retransmitted packet is detected. Availability: Per Active Charging Service.	Int32
wtp-dwnlk-pkts-retr	Description: The total number of WTP packets retransmitted in downlink direction. Triggers: Increments whenever a downlink WTP retransmitted packet is detected. Availability: Per Active Charging Service.	Int32
wtp-invk-pkts	Description: The total number of WTP INVOKE packets detected. Triggers: Increments whenever a WTP INVOKE packet is detected. Availability: Per Active Charging Service.	Int32
wtp-invk-tcl-zero	Description: The total number of WTP INVOKE TCL-0 packets detected. Triggers: Increments whenever a WTP INVOKE TCL-0 packet is detected. Availability: Per Active Charging Service.	Int32
wtp-invk-tcl-one	Description: The total number of WTP INVOKE TCL-1 packets detected. Triggers: Increments whenever a WTP INVOKE TCL-1 packet is detected. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
wtp-inv-k-tcl-two	Description: The total number of WTP INVOKE TCL-2 packets detected. Triggers: Increments whenever a WTP INVOKE TCL-2 packet is detected. Availability: Per Active Charging Service.	Int32
wtp-inv-k-tid-new	Description: The total number of WTP INVOKE with TID-new flag packets detected. Triggers: Increments whenever a WTP INVOKE packet with TID-new flag is received. Availability: Per Active Charging Service.	Int32
wtp-rslt-pkts	Description: The total number of WTP RESULT packets detected. Triggers: Increments whenever a WTP RESULT packet is detected. Availability: Per Active Charging Service.	Int32
wtp-ack-to-resp	Description: The total number of WTP ACK from Initiator to Responder detected. Triggers: Increments whenever a WTP ACK packet from Initiator to Responder is received. Availability: Per Active Charging Service.	Int32
wtp-ack-to-init	Description: The total number of WTP ACK from Responder to Initiator detected. Triggers: Increments whenever a WTP RESULT packet from Responder to Initiator is received. Availability: Per Active Charging Service.	Int32
wtp-abrt-to-resp	Description: The total number of WTP ABORT from Initiator to Responder detected. Triggers: Increments whenever a WTP ABORT packet from Initiator to Responder is received. Availability: Per Active Charging Service.	Int32
wtp-abrt-to-init	Description: The total number of WTP ABORT from Responder to Initiator detected. Triggers: Increments whenever a WTP ABORT packet from Responder to Initiator is received. Availability: Per Active Charging Service.	Int32
wtp-seg-inv-k	Description: The total number of WTP Segmented INVOKE packets detected. Triggers: Increments whenever a WTP Segmented INVOKE packet is detected. Availability: Per Active Charging Service.	Int32
wtp-seg-rslt	Description: The total number of WTP Segmented RESULT packets detected. Triggers: Increments whenever a WTP Segmented RESULT packet is detected. Availability: Per Active Charging Service.	Int32
wtp-neg-ack	Description: The total number of WTP Negative ACK packets detected. Triggers: Increments whenever a WTP Negative ACK packet is detected. Availability: Per Active Charging Service.	Int32
wtp-tid-vrf	Description: The total number of WTP TID Verification packets detected. Triggers: Increments whenever a WTP TID Verification packet is detected. Availability: Per Active Charging Service.	Int32
wtp-noninit-inv-k	Description: The total number of WTP Non-initial INVOKE packets detected. Triggers: Increments whenever a WTP Non-initial INVOKE packet is detected. Availability: Per Active Charging Service.	Int32
wtp-unk-pdu	Description: The total number of WTP unknown PDUs detected. Triggers: Increments whenever a WTP Unknown PDU packet is detected. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
WSP Analyzer Specific Statistics		
wsp-flows	Description: The combined total of the number of WSP flows previously analyzed + WSP flows currently being analyzed. Triggers: Increments whenever a new WSP flow is created. Availability: Per Active Charging Service.	Int32
wsp-flows-cur	Description: The number of WSP flows currently being analyzed. Triggers: Increments whenever a new WSP flow is created. Decrements whenever a WSP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
wsp-co-conn	Description: The total number of WSP connection-oriented connections detected. Triggers: Increments whenever a new WSP Connection-oriented flow is created. Availability: Per Active Charging Service.	Int32
wsp-cl-conn	Description: The total number of WSP connection-less connections detected. Triggers: Increments whenever a new WSP connection-less flow is created. Availability: Per Active Charging Service.	Int32
wsp-uplk-bytes	Description: The total number of WSP bytes detected in uplink direction. Triggers: Increments whenever a new WSP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
wsp-dwnlk-bytes	Description: The total number of WSP bytes detected in downlink direction. Triggers: Increments whenever a new WSP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
wsp-uplk-pkts	Description: The total number of WSP packets detected in uplink direction. Triggers: Increments whenever a new WSP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
wsp-dwnlk-pkts	Description: The total number of WSP packets detected in downlink direction. Triggers: Increments whenever a new WSP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
wsp-uplk-bytes-retr	Description: The total number of WSP bytes retransmitted in uplink direction. Triggers: Increments whenever a new WSP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
wsp-dwnlk-bytes-retr	Description: The total number of WSP bytes retransmitted in downlink direction. Triggers: Increments whenever a new WSP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
wsp-uplk-pkts-retr	Description: The total number of WSP packets retransmitted in uplink direction. Triggers: Increments whenever a new WSP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
wsp-dwnlk-pkts-retr	Description: The total number of WSP packets retransmitted in downlink direction. Triggers: Increments whenever a new WSP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
wsp-co-req-succ	Description: The total number of WSP Connection Oriented Requests succeeded. Triggers: Increments whenever a WSP connection-oriented request completes successfully. Availability: Per Active Charging Service.	Int32
wsp-co-req-fail	Description: The total number of WSP Connection Oriented Requests failed. Triggers: Increments whenever a WSP connection-oriented request fails. Availability: Per Active Charging Service.	Int32
wsp-cl-req-succ	Description: The total number of WSP Connection-less Requests succeeded. Triggers: Increments whenever a WSP connection-less request completes successfully. Availability: Per Active Charging Service.	Int32
wsp-cl-req-fail	Description: The total number of WSP Connection-less Requests failed. Triggers: Increments whenever a WSP connection-less request fails. Availability: Per Active Charging Service.	Int32
wsp-conn-pdu	Description: The total number of WSP CONNECT PDU detected. Triggers: Increments whenever a new WSP CONNECT PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-conn-rep	Description: The total number of WSP CONNECT REPLY PDU detected. Triggers: Increments whenever a new WSP CONNECT Response packet is detected. Availability: Per Active Charging Service.	Int32
wsp-redir	Description: The total number of WSP REDIRECT PDU detected. Triggers: Increments whenever a new WSP REDIRECT PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-disc	Description: The total number of WSP DISCONNECT PDU detected. Triggers: Increments whenever a new WSP DISCONNECT PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-susp	Description: The total number of WSP SUSPEND PDU detected. Triggers: Increments whenever a new WSP SUSPEND PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-resm	Description: The total number of WSP RESUME PDU detected. Triggers: Increments whenever a new WSP RESUME PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-opt	Description: The total number of WSP OPTIONS PDU detected. Triggers: Increments whenever a new WSP OPTIONS PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-head	Description: The total number of WSP HEAD PDU detected. Triggers: Increments whenever a new WSP HEAD PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-del	Description: The total number of WSP DELETE PDU detected. Triggers: Increments whenever a new WSP DELETE PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-trace	Description: The total number of WSP TRACE PDU detected. Triggers: Increments whenever a new WSP TRACE PDU packet is detected. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
wsp-reply	Description: The total number of WSP REPLY PDU detected. Triggers: Increments whenever a new WSP REPLY PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-put	Description: The total number of WSP PUT PDU detected. Triggers: Increments whenever a new WSP PUT PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-get	Description: The total number of WSP GET PDU detected. Triggers: Increments whenever a new WSP GET PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-push	Description: The total number of WSP PUSH PDU detected. Triggers: Increments whenever a new WSP PUSH PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-conf-push	Description: The total number of WSP CONFIRMED-PUSH PDU detected. Triggers: Increments whenever a new WSP CONFIRMED-PUSH PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-post	Description: The total number of WSP POST PDU detected. Triggers: Increments whenever a new WSP POST PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-data-frag	Description: The total number of WSP DATA-FRAGMENT PDU detected. Triggers: Increments whenever a new WSP DATA-FRAGMENT PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-rsrvd	Description: The total number of WSP RESERVED PDU detected. Triggers: Increments whenever a new WSP RESERVED PDU packet is detected. Availability: Per Active Charging Service.	Int32
wsp-inv-pkts	Description: The total number of invalid WSP packets detected. Triggers: Increments whenever an invalid WSP packet is detected. Availability: Per Active Charging Service.	Int32
MMS Analyzer Specific Statistics		
mms-send	Description: The total number of MMS message send transactions detected. Triggers: Increments whenever a new MMS SEND packet is detected. Availability: Per Active Charging Service.	Int32
mms-send-succ	Description: The total number of successful MMS message send transactions detected. Triggers: Increments whenever a MMS SEND transaction is successful. Availability: Per Active Charging Service.	Int32
mms-send-fail	Description: The total number of failed MMS message send transactions detected. Triggers: Increments whenever a MMS SEND transaction fails. Availability: Per Active Charging Service.	Int32
mms-retrv	Description: The total number of MMS message retrieve transactions detected. Triggers: Increments whenever a new MMS RETRIEVE packet is detected. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
mms-retrv-succ	Description: The total number of MMS message retrieve transactions succeeded. Triggers: Increments whenever a MMS RETRIEVE transaction is successful. Availability: Per Active Charging Service.	Int32
mms-retrv-fail	Description: The total number of MMS message retrieve transactions failed. Triggers: Increments whenever a MMS RETRIEVE transaction fails. Availability: Per Active Charging Service.	Int32
mms-uplk-bytes	Description: The total number of MMS bytes detected in uplink direction. Triggers: Increments whenever an uplink MMS packet is detected. Availability: Per Active Charging Service.	Int32
mms-dwnlk-bytes	Description: The total number of MMS bytes detected in downlink direction. Triggers: Increments whenever a downlink MMS packet is detected. Availability: Per Active Charging Service.	Int32
mms-uplk-pkts	Description: The total number of MMS packets detected in uplink direction. Triggers: Increments whenever an uplink MMS packet is detected. Availability: Per Active Charging Service.	Int32
mms-dwnlk-pkts	Description: The total number of MMS packets detected in downlink direction. Triggers: Increments whenever a downlink MMS packet is detected. Availability: Per Active Charging Service.	Int32
mms-uplk-bytes-retr	Description: The total number of MMS bytes retransmitted in uplink direction. Triggers: Increments whenever a new MMS retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
mms-dwnlk-bytes-retr	Description: The total number of MMS bytes retransmitted in downlink direction. Triggers: Increments whenever a new MMS retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
mms-uplk-pkts-retr	Description: The total number of MMS packets retransmitted in uplink direction. Triggers: Increments whenever a new MMS retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
mms-dwnlk-pkts-retr	Description: The total number of MMS packets retransmitted in downlink direction. Triggers: Increments whenever a new MMS retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
mms-snd-req	Description: The total number of MMS SEND Requests detected. Triggers: Increments whenever a new MMS Send-Request packet is detected. Availability: Per Active Charging Service.	Int32
mms-snd-conf	Description: The total number of MMS SEND Confirms detected. Triggers: Increments whenever a new MMS Send-Confirm packet is detected. Availability: Per Active Charging Service.	Int32
mms-ntf-ind	Description: The total number of MMS Notification Indication detected. Triggers: Increments whenever a new MMS Notify-Ind packet is detected. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
mms-ntf-ind-imm	Description: The total number of MMS Notification Indication Immediate detected. Triggers: Increments whenever a new MMS Notification Indication Immediate packet is detected. Availability: Per Active Charging Service.	Int32
mms-ntf-ind-del	Description: The total number of MMS Notification Indication Delayed detected. Triggers: Increments whenever a new MMS Notification Indication Delayed packet is detected. Availability: Per Active Charging Service.	Int32
mms-ntf-rsp	Description: The total number of MMS Notification Response detected. Triggers: Increments whenever a new MMS Notification Response packet is detected. Availability: Per Active Charging Service.	Int32
mms-retrv-conf	Description: The total number of MMS Retrieve Confirm detected. Triggers: Increments whenever a new MMS Retrieve Confirm packet is detected. Availability: Per Active Charging Service.	Int32
mms-ack-ind	Description: The total number of MMS ACK Indication detected. Triggers: Increments whenever a new MMS ACK Indication packet is detected. Availability: Per Active Charging Service.	Int32
mms-delvry-ind	Description: The total number of MMS Delivery Indication detected. Triggers: Increments whenever a new MMS Delivery Indication packet is detected. Availability: Per Active Charging Service.	Int32
mms-unk-pdu	Description: The total number of MMS Unknown PDU Type detected. Triggers: Increments whenever a new MMS Unknown PDU packet is detected. Availability: Per Active Charging Service.	Int32
mms-inv-pkts	Description: The total number of invalid MMS packets detected. Triggers: Increments whenever an invalid MMS packet is detected. Availability: Per Active Charging Service.	Int32
SIP Analyzer Specific Statistics		
sip-flows	Description: The combined total of the number of SIP flows previously analyzed + SIP flows currently being analyzed. Triggers: Increments whenever a new SIP flow is created. Availability: Per Active Charging Service.	Int32
sip-flows-cur	Description: The number of SIP flows currently being analyzed. Triggers: Increments whenever a new SIP flow is created. Decrements whenever a SIP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
sip-calls	Description: The total number of SIP calls detected. Triggers: Increments whenever a new SIP call arrives. Availability: Per Active Charging Service.	Int32
sip-uplk-bytes	Description: The total number of SIP bytes detected in uplink direction. Triggers: Increments whenever a new SIP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
sip-dwnlk-bytes	Description: The total number of SIP bytes detected in downlink direction. Triggers: Increments whenever a new SIP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
sip-uplk-pkts	Description: The total number of SIP packets detected in uplink direction. Triggers: Increments whenever a new SIP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
sip-dwnlk-pkts	Description: The total number of SIP packets detected in downlink direction. Triggers: Increments whenever a new SIP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
sip-uplk-bytes-retr	Description: The total number of SIP bytes retransmitted in uplink direction. Triggers: Increments whenever a new SIP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
sip-dwnlk-bytes-retr	Description: The total number of SIP bytes retransmitted in downlink direction. Triggers: Increments whenever a new SIP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
sip-uplk-pkts-retr	Description: The total number of SIP packets retransmitted in uplink direction. Triggers: Increments whenever a new SIP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
sip-dwnlk-pkts-retr	Description: The total number of SIP packets retransmitted in downlink direction. Triggers: Increments whenever a new SIP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
sip-invite	Description: The total number of SIP INVITE commands detected. Triggers: Increments whenever a new SIP INVITE packet is detected. Availability: Per Active Charging Service.	Int32
sip-bye	Description: The total number of SIP BYE commands detected. Triggers: Increments whenever a new SIP BYE packet is detected. Availability: Per Active Charging Service.	Int32
sip-ack	Description: The total number of SIP ACK commands detected. Triggers: Increments whenever a new SIP ACK packet is detected. Availability: Per Active Charging Service.	Int32
sip-cancel	Description: The total number of SIP CANCEL commands detected. Triggers: Increments whenever a new SIP CANCEL packet is detected. Availability: Per Active Charging Service.	Int32
sip-register	Description: The total number of SIP REGISTER commands detected. Triggers: Increments whenever a new SIP REGISTER packet is detected. Availability: Per Active Charging Service.	Int32
sip-inv-pkts	Description: The total number of invalid SIP packets detected. Triggers: Increments whenever an invalid SIP packet is detected. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
h323-calls	Description: The total number of H323 calls detected. Triggers: Increments whenever a new H323 call arrives. Availability: Per Active Charging Service.	Int32
h323-uplk-bytes	Description: The total number of H323 bytes transferred in the uplink direction. Triggers: Increments whenever a new H323 packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
h323-dwnlk-bytes	Description: The total number of H323 bytes transferred in the downlink direction. Triggers: Increments whenever a new H323 packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
h323-uplk-pkts	Description: The total number of H323 packets transferred in the uplink direction. Triggers: Increments whenever a new H323 packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
h323-dwnlk-pkts	Description: The total number of H323 packets transferred in the downlink direction. Triggers: Increments whenever a new H323 packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
h323-q931-messages	Description: The total number of Q931 messages both in uplink and downlink directions. Triggers: Increments whenever a new Q931 packet is detected. Availability: Per Active Charging Service.	Int64
h323-h245-messages	Description: The total number of H245 messages both in uplink and downlink directions. Triggers: Increments whenever a new H245 packet is detected. Availability: Per Active Charging Service.	Int64
h323-ras-messages	Description: The total number of RAS messages both in uplink and downlink directions. Triggers: Increments whenever a new RAS packet is detected. Availability: Per Active Charging Service.	Int64
sip-advanced-calls	Description: The total number of SIP calls processed by SIP ALG. Triggers: Increments whenever a SIP call is processed by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-uplk-bytes	Description: The total number of uplink bytes processed by SIP ALG. Triggers: Increments whenever an uplink packet is processed by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-dwnlk-bytes	Description: The total number of downlink bytes processed by SIP ALG. Triggers: Increments whenever a downlink packet is processed by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-uplk-pkts	Description: The total number of uplink packets processed by SIP ALG. Triggers: Increments whenever an uplink packet is processed by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-dwnlk-pkts	Description: The total number of downlink packets processed by SIP ALG. Triggers: Increments whenever a downlink packet is processed by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-register-rx	Description: The total number of REGISTER requests received by SIP ALG. Triggers: Increments whenever a REGISTER request is received by SIP ALG. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
sip-advanced-invite-rx	Description: The total number of INVITE requests received by SIP ALG. Triggers: Increments whenever an INVITE request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-ack-rx	Description: The total number of ACK requests received by SIP ALG. Triggers: Increments whenever an ACK request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-bye-rx	Description: The total number of BYE requests received by SIP ALG. Triggers: Increments whenever a BYE request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-info-rx	Description: The total number of INFO requests received by SIP ALG. Triggers: Increments whenever an INFO request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-prack-rx	Description: The total number of PRACK requests received by SIP ALG. Triggers: Increments whenever a PRACK request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-refer-rx	Description: The total number of REFER requests received by SIP ALG. Triggers: Increments whenever a REFER request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-cancel-rx	Description: The total number of CANCEL requests received by SIP ALG. Triggers: Increments whenever a CANCEL request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-update-rx	Description: The total number of UPDATE requests received by SIP ALG. Triggers: Increments whenever an UPDATE request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-message-rx	Description: The total number of MESSAGE requests received by SIP ALG. Triggers: Increments whenever a MESSAGE request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-options-rx	Description: The total number of OPTIONS requests received by SIP ALG. Triggers: Increments whenever an OPTIONS request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-publish-rx	Description: The total number of PUBLISH requests received by SIP ALG. Triggers: Increments whenever a PUBLISH request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-subscribe-rx	Description: The total number of SUBSCRIBE requests received by SIP ALG. Triggers: Increments whenever a SUBSCRIBE request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-notify-rx	Description: The total number of NOTIFY requests received by SIP ALG. Triggers: Increments whenever a NOTIFY request is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-1xx-rx	Description: The total number of 1XX responses received by SIP ALG. Triggers: Increments whenever a 1XX response is received by SIP ALG. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
sip-advanced-2xx-rx	Description: The total number of 2XX responses received by SIP ALG. Triggers: Increments whenever a 2XX response is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-3xx-rx	Description: The total number of 3XX responses received by SIP ALG. Triggers: Increments whenever a 3XX response is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-4xx-rx	Description: The total number of 4XX responses received by SIP ALG. Triggers: Increments whenever a 4XX response is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-5xx-rx	Description: The total number of 5XX responses received by SIP ALG. Triggers: Increments whenever a 5XX response is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-6xx-rx	Description: The total number of 6XX responses received by SIP ALG. Triggers: Increments whenever a 6XX response is received by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-register-tx	Description: The total number of REGISTER requests transmitted by SIP ALG. Triggers: Increments whenever a REGISTER request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-invite-tx	Description: The total number of INVITE requests transmitted by SIP ALG. Triggers: Increments whenever an INVITE request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-ack-tx	Description: The total number of ACK requests transmitted by SIP ALG. Triggers: Increments whenever an ACK request is transmitted by SIP ALG.. Availability: Per Active Charging Service.	Int64
sip-advanced-bye-tx	Description: The total number of BYE requests transmitted by SIP ALG. Triggers: Increments whenever a BYE request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-info-tx	Description: The total number of INFO requests transmitted by SIP ALG. Triggers: Increments whenever an INFO request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-prack-tx	Description: The total number of PRACK requests transmitted by SIP ALG. Triggers: Increments whenever a PRACK request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-refer-tx	Description: The total number of REFER requests transmitted by SIP ALG. Triggers: Increments whenever a REFER request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-cancel-tx	Description: The total number of CANCEL requests transmitted by SIP ALG. Triggers: Increments whenever a CANCEL request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-update-tx	Description: The total number of UPDATE requests transmitted by SIP ALG. Triggers: Increments whenever an UPDATE request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64

■ Common Syntax Options

Variables	Description	Data Type
sip-advanced-message-tx	Description: The total number of MESSAGE requests transmitted by SIP ALG. Triggers: Increments whenever a MESSAGE request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-options-tx	Description: The total number of OPTIONS requests transmitted by SIP ALG. Triggers: Increments whenever an OPTIONS request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-publish-tx	Description: The total number of PUBLISH requests transmitted by SIP ALG. Triggers: Increments whenever a PUBLISH request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-subscribe-tx	Description: The total number of SUBSCRIBE requests transmitted by SIP ALG. Triggers: Increments whenever a SUBSCRIBE request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-notify-tx	Description: The total number of NOTIFY requests transmitted by SIP ALG. Triggers: Increments whenever a NOTIFY request is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-1xx-tx	Description: The total number of 1XX responses transmitted by SIP ALG. Triggers: Increments whenever a 1XX response is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-2xx-tx	Description: The total number of 2XX responses transmitted by SIP ALG. Triggers: Increments whenever a 2XX response is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-3xx-tx	Description: The total number of 3XX responses transmitted by SIP ALG. Triggers: Increments whenever a 3XX response is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-4xx-tx	Description: The total number of 4XX responses transmitted by SIP ALG. Triggers: Increments whenever a 4XX response is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-5xx-tx	Description: The total number of 5XX responses transmitted by SIP ALG. Triggers: Increments whenever a 5XX response is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
sip-advanced-6xx-tx	Description: The total number of 6XX responses transmitted by SIP ALG. Triggers: Increments whenever a 6XX response is transmitted by SIP ALG. Availability: Per Active Charging Service.	Int64
RTSP Analyzer Specific Statistics		
rtsp-flows	Description: The combined total of the number of RTSP flows previously analyzed + RTSP flows currently being analyzed. Triggers: Increments whenever a new RTSP flow is created. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
rtsp-flows-cur	Description: The number of RTSP flows currently being analyzed. Triggers: Increments whenever a new RTSP flow is created. Decrements whenever an RTSP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
rtsp-sess	Description: The total number of RTSP sessions detected. Triggers: Increments whenever a new RTSP session is created. Availability: Per Active Charging Service.	Int32
rtsp-uplk-bytes	Description: The total number of RTSP bytes detected in uplink direction. Triggers: Increments whenever a new RTSP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
rtsp-dwnlk-bytes	Description: The total number of RTSP bytes detected in downlink direction. Triggers: Increments whenever a new RTSP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
rtsp-uplk-pkts	Description: The total number of RTSP packets detected in uplink direction. Triggers: Increments whenever a new RTSP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
rtsp-dwnlk-pkts	Description: The total number of RTSP packets detected in downlink direction. Triggers: Increments whenever a new RTSP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
rtsp-uplk-bytes-retr	Description: The total number of RTSP bytes retransmitted in uplink direction. Triggers: Increments whenever a new RTSP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
rtsp-dwnlk-bytes-retr	Description: The total number of RTSP bytes retransmitted in downlink direction. Triggers: Increments whenever a new RTSP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
rtsp-uplk-pkts-retr	Description: The total number of RTSP packets retransmitted in uplink direction. Triggers: Increments whenever a new RTSP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
rtsp-dwnlk-pkts-retr	Description: The total number of RTSP packets retransmitted in downlink direction. Triggers: Increments whenever a new RTSP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
rtsp-play	Description: The total number of RTSP PLAY commands detected. Triggers: Increments whenever a new RTSP PLAY command is detected. Availability: Per Active Charging Service.	Int32
rtsp-setup	Description: The total number of RTSP SETUP commands detected. Triggers: Increments whenever a new RTSP SETUP command is detected. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
rtsp-pause	Description: The total number of RTSP PAUSE commands detected. Triggers: Increments whenever a new RTSP PAUSE command is detected. Availability: Per Active Charging Service.	Int32
rtsp-record	Description: The total number of RTSP RECORD commands detected. Triggers: Increments whenever a new RTSP RECORD command is detected. Availability: Per Active Charging Service.	Int32
rtsp-option	Description: The total number of RTSP OPTION commands detected. Triggers: Increments whenever a new RTSP OPTION command is detected. Availability: Per Active Charging Service.	Int32
rtsp-redir	Description: The total number of RTSP REDIRECT commands detected. Triggers: Increments whenever a new RTSP REDIRECT command is detected. Availability: Per Active Charging Service.	Int32
rtsp-desc	Description: The total number of RTSP DESCRIBE commands detected. Triggers: Increments whenever a new RTSP DESCRIBE command is detected. Availability: Per Active Charging Service.	Int32
rtsp-announ	Description: The total number of RTSP ANNOUNCE commands detected. Triggers: Increments whenever a new RTSP ANNOUNCE command is detected. Availability: Per Active Charging Service.	Int32
rtsp-trdwn	Description: The total number of RTSP TEARDOWN commands detected. Triggers: Increments whenever a new RTSP TEARDOWN command is detected. Availability: Per Active Charging Service.	Int32
rtsp-get-param	Description: The total number of RTSP GET PARAMETER commands detected. Triggers: Increments whenever a new RTSP GET PARAMETER command is detected. Availability: Per Active Charging Service.	Int32
rtsp-set-param	Description: The total number of RTSP SET PARAMETER commands detected. Triggers: Increments whenever a new RTSP SET PARAMETER command is detected. Availability: Per Active Charging Service.	Int32
rtsp-inv-pkts	Description: The total number of invalid RTSP packets detected. Triggers: Increments whenever an invalid RTSP packet is detected. Availability: Per Active Charging Service.	Int32
RTP Analyzer Specific Statistics		
rtp-flows	Description: The combined total of the number of RTP flows previously analyzed + RTP flows currently being analyzed. Triggers: Increments whenever a new RTP flow is created. Availability: Per Active Charging Service.	Int32
rtp-flows-cur	Description: The number of RTP flows currently being analyzed. Triggers: Increments whenever a new RTP flow is created. Decrements whenever an RTP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32

Variables	Description	Data Type
rtp-uplk-bytes	Description: The total number of RTP bytes detected in uplink direction. Triggers: Increments whenever a new RTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
rtp-dwnlk-bytes	Description: The total number of RTP bytes detected in downlink direction. Triggers: Increments whenever a new RTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
rtp-uplk-pkts	Description: The total number of RTP packets detected in uplink direction. Triggers: Increments whenever a new RTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
rtp-dwnlk-pkts	Description: The total number of RTP packets detected in downlink direction. Triggers: Increments whenever a new RTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
FTP Analyzer Specific Statistics		
ftp-flows	Description: The combined total of the number of FTP flows previously analyzed + FTP flows currently being analyzed. Triggers: Increments whenever a new FTP flow is created. Availability: Per Active Charging Service.	Int32
ftp-flows-cur	Description: The number of FTP flows currently being analyzed. Triggers: Increments whenever a new FTP flow is created. Decrements whenever an FTP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
ftp-uplk-bytes	Description: The total number of FTP bytes detected in uplink direction. Triggers: Increments whenever a new FTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
ftp-dwnlk-bytes	Description: The total number of FTP bytes detected in downlink direction. Triggers: Increments whenever a new FTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
ftp-uplk-pkts	Description: The total number of FTP packets detected in uplink direction. Triggers: Increments whenever a new FTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
ftp-dwnlk-pkts	Description: The total number of FTP packets detected in downlink direction. Triggers: Increments whenever a new FTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
ftp-retr	Description: The total number of FTP RETR commands detected. Triggers: Increments whenever an FTP packet is retransmitted. Availability: Per Active Charging Service.	Int32
ftp-stor	Description: The total number of FTP STOR commands detected. Triggers: Increments whenever a new FTP STOR command is detected. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
ftp-inv-pkts	Description: The total number of invalid FTP packets detected. Triggers: Increments whenever an invalid FTP packet is detected. Availability: Per Active Charging Service.	Int32
pptp-flows	Description: The combined total of the number of PPTP flows previously analyzed + PPTP flows currently being analyzed. Triggers: Increments whenever a new PPTP flow is created. Availability: Per Active Charging Service.	Int32
pptp-gre-flows	Description: The combined total of the number of PPTP GRE flows previously analyzed + PPTP GRE flows currently being analyzed. Triggers: Increments whenever a new PPTP GRE flow is created. Availability: Per Active Charging Service.	Int32
pptp-uplk-bytes	Description: The total number of uplink bytes sent across all PPTP control flows. Triggers: Increments whenever a new PPTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
pptp-dwnlk-bytes	Description: The total number of downlink bytes received across all PPTP control flows. Triggers: Increments whenever a new PPTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
pptp-uplk-pkts	Description: The total number of uplink packets sent across all PPTP control flows. Triggers: Increments whenever a new PPTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
pptp-dwnlk-pkts	Description: The total number of downlink packets received across all PPTP control flows. Triggers: Increments whenever a new PPTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
pptp-inv-pkts	Description: The total number of invalid packets received across all PPTP control flows. Triggers: Increments whenever an invalid PPTP packet is detected. Availability: Per Active Charging Service.	Int32
pptp-unknown-pkts	Description: The total number of unknown packets received across all PPTP control flows. Triggers: Increments whenever an unknown PPTP packet is detected. Availability: Per Active Charging Service.	Int32
pptp-gre-uplk-bytes	Description: The total number of uplink bytes sent across all PPTP GRE flows. Triggers: Increments whenever a new PPTP GRE packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
pptp-gre-dwnlk-bytes	Description: The total number of downlink bytes received across all PPTP GRE flows. Triggers: Increments whenever a new PPTP GRE packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
pptp-gre-uplk-pkts	Description: The total number of uplink packets sent across all PPTP GRE flows. Triggers: Increments whenever a new PPTP GRE packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
pptp-gre-dwnlk-pkts	Description: The total number of downlink packets received across all PPTP GRE flows. Triggers: Increments whenever a new PPTP GRE packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
tftp-flows	Description: The total number of TFTP control and data flows established. Triggers: Increments whenever a new TFTP flow is created. Availability: Per Active Charging Service.	Int32
tftp-uplk-bytes	Description: The total number of uplink bytes sent across all the TFTP control and data flows. Triggers: Increments whenever a new TFTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
tftp-dwnlk-bytes	Description: The total number of downlink bytes received across all the TFTP control and data flows. Triggers: Increments whenever a new TFTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
tftp-uplk-pkts	Description: The total number of uplink packets sent across all the TFTP control and data flows. Triggers: Increments whenever a new TFTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
tftp-dwnlk-pkts	Description: The total number of downlink packets received across all the TFTP control and data flows. Triggers: Increments whenever a new TFTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
tftp-total-read-sessions	Description: The total number of TFTP control flow read operations. Triggers: Increments when a new TFTP control flow read operation is detected. Availability: Per Active Charging Service.	Int32
tftp-total-write-sessions	Description: The total number of TFTP control flow write operations. Triggers: Increments when a new TFTP control flow write operation is detected. Availability: Per Active Charging Service.	Int32
tftp-unsupp-req-pkts	Description: The total number of TFTP unsupported control flow requests. Triggers: Increments when a new TFTP unsupported control flow request is detected. Availability: Per Active Charging Service.	Int32
tftp-invalid-ctrl	Description: The total number of TFTP control flow invalid packets. Triggers: Increments when a new TFTP control flow invalid packet is detected. Availability: Per Active Charging Service.	Int32
tftp-invalid-data-pkts	Description: The total number of TFTP data flow invalid packets. Triggers: Increments when a new TFTP data flow invalid packet is detected. Availability: Per Active Charging Service.	Int32
tftp-data-uplk-bytes	Description: The total number of uplink bytes across all TFTP data flows. Triggers: Increments whenever a new TFTP data flow packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
tftp-data-dwnlk-bytes	Description: The total number of downlink bytes across all TFTP data flows. Triggers: Increments whenever a new TFTP data flow packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
tftp-data-uplk-pkts	Description: The total number of uplink packets across all TFTP data flows. Triggers: Increments whenever a new TFTP data flow packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
tftp-data-dwnlk-pkts	Description: The total number of downlink packets across all TFTP data flows. Triggers: Increments whenever a new TFTP data flow packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
SMTP Analyzer Specific Statistics		
smtp-flows	Description: The combined total of the number of SMTP flows previously analyzed + SMTP flows currently being analyzed. Triggers: Increments whenever a new SMTP flow is created. Availability: Per Active Charging Service.	Int32
smtp-flows-cur	Description: The number of SMTP flows currently being analyzed. Triggers: Increments whenever a new SMTP flow is created. Decrements whenever an SMTP flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
smtp-uplk-bytes	Description: The total number of SMTP bytes detected in uplink direction. Triggers: Increments whenever a new SMTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
smtp-dwnlk-bytes	Description: The total number of SMTP bytes detected in downlink direction. Triggers: Increments whenever a new SMTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
smtp-uplk-pkts	Description: The total number of SMTP packets detected in uplink direction. Triggers: Increments whenever a new SMTP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
smtp-dwnlk-pkts	Description: The total number of SMTP packets detected in downlink direction. Triggers: Increments whenever a new SMTP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
smtp-uplk-bytes-retr	Description: The total number of SMTP bytes retransmitted in uplink direction. Triggers: Increments whenever a new SMTP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
smtp-dwnlk-bytes-retr	Description: The total number of SMTP bytes retransmitted in downlink direction. Triggers: Increments whenever a new SMTP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
smtp-uplk-pkts-retr	Description: The total number of SMTP packets retransmitted in uplink direction. Triggers: Increments whenever a new SMTP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
smtp-dwnlk-pkts-retr	Description: The total number of SMTP packets retransmitted in downlink direction. Triggers: Increments whenever a new SMTP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
smtp-unk-cmd	Description: The total number of SMTP Unknown commands detected. Triggers: Increments whenever an SMTP unknown command is detected. Availability: Per Active Charging Service.	Int32
smtp-unk-resp	Description: The total number of SMTP Unknown responses detected. Triggers: Increments whenever an SMTP unknown response is received. Availability: Per Active Charging Service.	Int32
smtp-req-succ	Description: The total number of SMTP requests succeeded. Triggers: Increments whenever an SMTP request is successful. Availability: Per Active Charging Service.	Int32
smtp-req-fail	Description: The total number of failed SMTP requests. Triggers: Increments whenever an SMTP request fails. Availability: Per Active Charging Service.	Int32
smtp-helo	Description: The total number of SMTP HELO commands detected. Triggers: Increments whenever an SMTP HELO command is detected. Availability: Per Active Charging Service.	Int32
smtp-ehlo	Description: The total number of SMTP EHLO commands detected. Triggers: Increments whenever an SMTP EHLO command is detected. Availability: Per Active Charging Service.	Int32
smtp-mail-fm	Description: The total number of SMTP MAIL FROM commands detected. Triggers: Increments whenever an SMTP MAIL FROM command is detected. Availability: Per Active Charging Service.	Int32
smtp-rcpt-to	Description: The total number of SMTP RCPT TO commands detected. Triggers: Increments whenever an SMTP RCPT TO command is detected. Availability: Per Active Charging Service.	Int32
smtp-data	Description: The total number of SMTP DATA commands detected. Triggers: Increments whenever an SMTP DATA command is detected. Availability: Per Active Charging Service.	Int32
smtp-bdat	Description: The total number of SMTP BDAT commands detected. Triggers: Increments whenever an SMTP BDAT command is detected. Availability: Per Active Charging Service.	Int32
smtp-vrfy	Description: The total number of SMTP VERIFY commands detected. Triggers: Increments whenever an SMTP VERIFY command is detected. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
smtp-expn	Description: The total number of SMTP EXPN commands detected. Triggers: Increments whenever an SMTP EXPN command is detected. Availability: Per Active Charging Service.	Int32
smtp-noop	Description: The total number of SMTP NOOP commands detected. Triggers: Increments whenever an SMTP NOOP command is detected. Availability: Per Active Charging Service.	Int32
smtp-rset	Description: The total number of SMTP RSET commands detected. Triggers: Increments whenever an SMTP RSET command is detected. Availability: Per Active Charging Service.	Int32
smtp-quit	Description: The total number of SMTP QUIT commands detected. Triggers: Increments whenever an SMTP QUIT command is detected. Availability: Per Active Charging Service.	Int32
smtp-inv-pkts	Description: The total number of invalid SMTP packets detected. Triggers: Increments whenever an invalid SMTP packet is detected. Availability: Per Active Charging Service.	Int32
POP3 Analyzer Specific Statistics		
pop3-flows	Description: The combined total of the number of POP3 flows previously analyzed + POP3 flows currently being analyzed. Triggers: Increments whenever a new POP3 flow is created. Availability: Per Active Charging Service.	Int32
pop3-flows-cur	Description: The number of POP3 flows currently being analyzed. Triggers: Increments whenever a new POP3 flow is created. Decrements whenever a POP3 flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
pop3-uplk-bytes	Description: The total number of POP3 bytes detected in uplink direction. Triggers: Increments whenever a new POP3 packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
pop3-dwnlk-bytes	Description: The total number of POP3 bytes detected in downlink direction. Triggers: Increments whenever a new POP3 packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
pop3-uplk-pkts	Description: The total number of POP3 packets detected in uplink direction. Triggers: Increments whenever a new POP3 packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
pop3-dwnlk-pkts	Description: The total number of POP3 packets detected in downlink direction. Triggers: Increments whenever a new POP3 packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
pop3-uplk-bytes-retr	Description: The total number of POP3 bytes retransmitted in uplink direction. Triggers: Increments whenever a new POP3 retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
pop3-dwnlk-bytes-retr	Description: The total number of POP3 bytes retransmitted in downlink direction. Triggers: Increments whenever a new POP3 retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
pop3-uplk-pkts-retr	Description: The total number of POP3 packets retransmitted in uplink direction. Triggers: Increments whenever a new POP3 retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
pop3-dwnlk-pkts-retr	Description: The total number of POP3 packets retransmitted in downlink direction. Triggers: Increments whenever a new POP3 retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
pop3-retr	Description: The total number of POP3 RETR commands detected. Triggers: Increments whenever a POP3 RETR command is detected. Availability: Per Active Charging Service.	Int32
pop3-retr-succ	Description: The total number of POP3 RETR commands successful. Triggers: Increments whenever a POP3 RETR command is successful. Availability: Per Active Charging Service.	Int32
pop3-list	Description: The total number of POP3 LIST commands detected. Triggers: Increments whenever a POP3 LIST command is detected. Availability: Per Active Charging Service.	Int32
pop3-list-succ	Description: The total number of POP3 LIST commands successful. Triggers: Increments whenever a POP3 LIST command is successful. Availability: Per Active Charging Service.	Int32
pop3-inv-pkts	Description: The total number of invalid POP3 packets detected. Triggers: Increments whenever an invalid POP3 packet is detected. Availability: Per Active Charging Service.	Int32
IMAP Statistics		
imap-uplk-bytes	Description: The total number of IMAP bytes detected in uplink direction. Triggers: Increments whenever a new IMAP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
imap-dwnlk-bytes	Description: The total number of IMAP bytes detected in downlink direction. Triggers: Increments whenever a new IMAP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
imap-uplk-pkts	Description: The total number of IMAP packets detected in uplink direction. Triggers: Increments whenever a new IMAP packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
imap-dwnlk-pkts	Description: The total number of IMAP packets detected in downlink direction. Triggers: Increments whenever a new IMAP packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
imap-uplk-bytes-retr	Description: The total number of IMAP retry bytes detected in uplink direction. Triggers: Increments whenever a new IMAP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
imap-dwnlk-bytes-retr	Description: The total number of IMAP retry bytes detected in downlink direction. Triggers: Increments whenever a new IMAP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
imap-uplk-pkts-retr	Description: The total number of IMAP retry packets detected in uplink direction. Triggers: Increments whenever a new IMAP retransmitted packet is detected in uplink direction. Availability: Per Active Charging Service.	Int32
imap-dwnlk-pkts-retr	Description: The total number of IMAP retry packets detected in downlink direction. Triggers: Increments whenever a new IMAP retransmitted packet is detected in downlink direction. Availability: Per Active Charging Service.	Int32
imap-req-succ	Description: The total number of successful IMAP requests detected. Triggers: Increments whenever an IMAP request is successful. Availability: Per Active Charging Service.	Int32
imap-req-fail	Description: The total number of failed IMAP requests detected. Triggers: Increments whenever an IMAP request fails. Availability: Per Active Charging Service.	Int32
imap-reply-untag	Description: The total number of untagged IMAP replies detected. Triggers: Increments whenever an untagged IMAP reply is detected. Availability: Per Active Charging Service.	Int32
imap-reply-commcont	Description: The total number of IMAP Command Cont replies detected. Triggers: Increments whenever an IMAP command CONT reply is detected. Availability: Per Active Charging Service.	Int32
imap-unk-command	Description: The total number of unknown IMAP commands detected. Triggers: Increments whenever an IMAP unknown command is detected. Availability: Per Active Charging Service.	Int32
imap-unk-reply	Description: The total number of unknown IMAP replies detected. Triggers: Increments whenever an IMAP unknown reply is detected. Availability: Per Active Charging Service.	Int32
acf-req-created	Description: Total number of ACF requests created. Triggers: Increments whenever a new ACF request is created. Availability: Per Active Charging Service.	Int64
acf-wr-req-succ	Description: Total number of successful ACF WRITE requests. Triggers: Increments whenever an ACF write request is successful. Availability: Per Active Charging Service.	Int64
acf-wr-req-failed	Description: Total number of ACF WRITE requests failed. Triggers: Increments whenever an ACF write request fails. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
acf-rd-rsp-succ	Description: Total number of successful ACF READ responses. Triggers: Increments whenever an ACF READ response is received. Availability: Per Active Charging Service.	Int64
acf-rd-rsp-failed	Description: Total number of failed READ responses. Triggers: Increments whenever an ACF READ response fails. Availability: Per Active Charging Service.	Int64
acf-http-permit	Description: Total number of HTTP URLs permitted from ACF. Triggers: Increments whenever an HTTP URL is permitted from ACF. Availability: Per Active Charging Service.	Int64
acf-http-deny	Description: Total number of HTTP URLs denied from ACF. Triggers: Increments whenever an HTTP URL is denied from ACF. Availability: Per Active Charging Service.	Int64
acf-http-redirect	Description: Total number of HTTP URLs redirected from ACF. Triggers: Increments whenever an HTTP URL is redirected from ACF. Availability: Per Active Charging Service.	Int64
acf-wap-permit	Description: Total number of WAP URLs permitted from ACF. Triggers: Increments whenever a WAP URL is permitted from ACF. Availability: Per Active Charging Service.	Int64
acf-wap-deny	Description: Total number of WAP URLs denied from ACF. Triggers: Increments whenever a WAP URL is denied from ACF. Availability: Per Active Charging Service.	Int64
acf-wap-redirect	Description: Total number of WAP URLs redirected from ACF. Triggers: Increments whenever a WAP URL is redirected from ACF. Availability: Per Active Charging Service.	Int64
P2P Specific Statistics		
p2p-flows	Description: The total number of P2P flows detected until a given time. Triggers: Increments when a flow is marked as P2P. Availability: Per Active Charging Service	Int32
p2p-flows-cur	Description: The number of currently active P2P flows at a given instance in time. Triggers: Increments when a flow is marked as P2P. Decrements when the flow state is cleaned up. Availability: Per Active Charging Service Type: Gauge	Int32
p2p-subscribers	Description: The total number of P2P subscribers detected until a given time. Triggers: Increments when whenever the first P2P flow for a subscriber is detected. Does not increment for subsequent P2P flows in the same session. If the subscriber logsoff and then returns, and has a P2P flow, this counter increments again. Availability: Per Active Charging Service.	Int32

Variables	Description	Data Type
p2p-subscribers-cur	Description: The number of active P2P subscribers at a given instance in time. Triggers: Increments whenever, in the sampling time period, the first P2P flow for a subscriber is detected. Decrements whenever, in the sampling time period, all P2P flows for a P2P-marked subscriber ends. Availability: Per Active Charging Service. Type: Gauge	Int32
p2p-skype-voice-duration	Description: The total Skype voice duration for a P2P subscriber at a given instance in time. Triggers: Increments whenever a detected voice flow for Skype ends the voice conversation. Availability: Per Active Charging Service	Int32
p2p-msn-voice-duration	Description: The total MSN voice duration for a P2P subscriber at a given instance in time. Triggers: Increments whenever a detected voice flow for MSN ends the voice conversation. Availability: Per Active Charging Service	Int32
p2p-oscar-voice-duration	Description: The total Oscar voice duration for a P2P subscriber at a given instance in time. Triggers: Increments whenever a detected voice flow for Oscar ends the voice conversation. Availability: Per Active Charging Service	Int32
p2p-gtalk-voice-duration	Description: The total GTalk voice duration for a P2P subscriber at a given instance in time. Triggers: Increments whenever a detected voice flow for GTalk ends the voice conversation. Availability: Per Active Charging Service	Int32
p2p-yahoo-voice-duration	Description: The total Yahoo voice duration for a P2P subscriber at a given instance in time. Triggers: Increments whenever a detected voice flow for Yahoo ends the voice conversation. Availability: Per Active Charging Service	Int32
p2p-skype-uplnk-bytes	Description: The number of bytes of Skype traffic detected in uplink direction. Triggers: Increments when a packet of Skype traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-dwlnk-bytes	Description: The number of bytes of Skype traffic sent to MS. Triggers: Increments when a packet of Skype traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-uplnk-pkts	Description: The number of packets of Skype traffic received from MS. Triggers: Increments when a packet of Skype traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skype-dwlnk-pkts	Description: The number of packets of Skype traffic sent to MS. Triggers: Increments when a packet of Skype traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-skype-voice-uplnk-bytes	Description: The number of bytes of Skype voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Skype voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-voice-dwnlnk-bytes	Description: The number of bytes of Skype voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Skype voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-voice-uplnk-pkts	Description: The number of packets of Skype voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Skype voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skype-voice-dwnlnk-pkts	Description: The number of packets of Skype voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Skype voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skype-non-voice-uplnk-bytes	Description: The number of bytes of Skype non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Skype non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-skype-non-voice-dwlnk-bytes	Description: The number of bytes of Skype non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Skype non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-non-voice-uplnk-pkts	Description: The number of packets of Skype non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Skype non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skype-non-voice-dwlnk-pkts	Description: The number of packets of Skype non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Skype non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skype-audio-uplnk-bytes	Description: The number of bytes of Skype audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Skype audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-audio-dwlnk-bytes	Description: The number of bytes of Skype audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Skype audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-skype-audio-uplnk-pkts	Description: The number of packets of Skype audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Skype audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skype-audio-dwlnk-pkts	Description: The number of packets of Skype audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Skype audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skype-non-audio-uplnk-bytes	Description: The number of bytes of Skype non-audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Skype non-audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-non-audio-dwlnk-bytes	Description: The number of bytes of Skype non-audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Skype non-audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-non-audio-uplnk-pkts	Description: The number of packets of Skype non-audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Skype non-audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-skype-non-audio-dwlnk-pkts	Description: The number of packets of Skype non-audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Skype non-audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skype-unclassified-uplnk-bytes	Description: The number of bytes of Skype unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Skype unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-unclassified-dwlnk-bytes	Description: The number of bytes of Skype unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Skype unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-unclassified-uplnk-pkts	Description: The number of packets of Skype unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Skype unclassified traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skype-unclassified-dwlnk-pkts	Description: The number of packets of Skype unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Skype unclassified traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-bittorrent-uplnk-bytes	Description: The number of bytes of BitTorrent traffic received from MS. Triggers: Increments when a packet of BitTorrent traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-bittorrent-dwlnk-bytes	Description: The number of bytes of BitTorrent traffic sent to MS. Triggers: Increments when a packet of BitTorrent traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-bittorrent-uplnk-pkts	Description: The number of packets of BitTorrent traffic received from MS. Triggers: Increments when a packet of BitTorrent traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-bittorrent-dwlnk-pkts	Description: The number of packets of BitTorrent traffic sent to MS. Triggers: Increments when a packet of BitTorrent traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-edonkey-uplnk-bytes	Description: The number of bytes of eDonkey traffic received from MS. Triggers: Increments when a packet of eDonkey traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-edonkey-dwlnk-bytes	Description: The number of bytes of eDonkey traffic sent to MS. Triggers: Increments when a packet of eDonkey traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-edonkey-uplnk-pkts	Description: The number of packets of eDonkey traffic received from MS. Triggers: Increments when a packet of eDonkey traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-edonkey-dwlnk-pkts	Description: The number of packets of eDonkey traffic sent to MS. Triggers: Increments when a packet of eDonkey traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-uplnk-bytes	Description: The number of bytes of MSN traffic received from MS. Triggers: Increments when a packet of MSN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-dwlnk-bytes	Description: The number of bytes of MSN traffic sent to MS. Triggers: Increments when a packet of MSN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-uplnk-pkts	Description: The number of packets of MSN traffic received from MS. Triggers: Increments when a packet of MSN traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-dwlnk-pkts	Description: The number of packets of MSN traffic sent to MS. Triggers: Increments when a packet of MSN traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-msn-voice-uplnk-bytes	Description: The number of bytes of MSN voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of MSN voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-voice-dwlnk-bytes	Description: The number of bytes of MSN voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of MSN voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-voice-uplnk-pkts	Description: The number of packets of MSN voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of MSN voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-voice-dwlnk-pkts	Description: The number of packets of MSN voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of MSN voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-audio-uplnk-bytes	Description: The number of bytes of MSN audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of MSN audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-msn-audio-dwlnk-bytes	Description: The number of bytes of MSN audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of MSN audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-audio-uplnk-pkts	Description: The number of packets of MSN audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of MSN audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-audio-dwlnk-pkts	Description: The number of packets of MSN audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of MSN audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-non-audio-or-video-uplnk-bytes	Description: The number of bytes of MSN non-audio or non-video traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of MSN non-audio or non-video traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-non-audio-or-video-dwlnk-bytes	Description: The number of bytes of MSN non-audio or non-video traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of MSN non-audio or non-video traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-msn-non-audio-or-video-uplnk-pkts	Description: The number of packets of MSN non-audio or non-video traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of MSN non-audio or non-video traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-non-audio-or-video-dwlnk-pkts	Description: The number of packets of MSN non-audio or non-video traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of MSN non-audio or non-video traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-unclassified-uplnk-bytes	Description: The number of bytes of MSN unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of MSN unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-unclassified-dwlnk-bytes	Description: The number of bytes of MSN unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of MSN unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-unclassified-uplnk-pkts	Description: The number of packets of MSN unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of MSN unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-msn-unclassified-dwlnk-pkts	Description: The number of packets of MSN unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of MSN unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-non-voice-uplnk-bytes	Description: The number of bytes of MSN non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of MSN non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-non-voice-dwlnk-bytes	Description: The number of bytes of MSN non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of MSN non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-non-voice-uplnk-pkts	Description: The number of packets of MSN non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of MSN non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-non-voice-dwlnk-pkts	Description: The number of packets of MSN non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of MSN non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-msn-video-uplnk-bytes	Description: The number of bytes of MSN video traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of MSN video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-video-dwlnk-bytes	Description: The number of bytes of MSN video traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of MSN video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-msn-video-uplnk-pkts	Description: The number of packets of MSN video traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of MSN video traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-msn-video-dwlnk-pkts	Description: The number of packets of MSN video traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of MSN video traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-video-uplnk-bytes	Description: The number of bytes of Oscar video traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Oscar video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-oscar-video-dwlnk-bytes	Description: The number of bytes of Oscar video traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Oscar video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-oscar-video-uplnk-pkts	Description: The number of packets of Oscar video traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Oscar video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-oscar-video-dwlnk-pkts	Description: The number of packets of Oscar video traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Oscar video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-video-uplnk-bytes	Description: The number of bytes of GTalk video traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of GTalk video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-video-dwlnk-bytes	Description: The number of bytes of GTalk video traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of GTalk video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-gtalk-video-uplnk-pkts	Description: The number of packets of GTalk video traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of GTalk video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-video-dwlnk-pkts	Description: The number of packets of GTalk video traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of GTalk video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-video-uplnk-bytes	Description: The number of bytes of Skype video traffic received from MS.  Important: This statistic is not supported in this release. Please contact your Cisco account representative for more information. Triggers: Increments when a packet of Skype video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-video-dwlnk-bytes	Description: The number of bytes of Skype video traffic sent to MS.  Important: This statistic is not supported in this release. Please contact your Cisco account representative for more information. Triggers: Increments when a packet of Skype video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-skype-video-uplnk-pkts	Description: The number of packets of Skype video traffic received from MS.  Important: This statistic is not supported in this release. Please contact your Cisco account representative for more information. Triggers: Increments when a packet of Skype video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-skype-video-dwlnk-pkts	Description: The number of packets of Skype video traffic sent to MS.  Important: This statistic is not supported in this release. Please contact your Cisco account representative for more information. Triggers: Increments when a packet of Skype video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-video-uplnk-bytes	Description: The number of bytes of Yahoo video traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Yahoo video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-video-dwlnk-bytes	Description: The number of bytes of Yahoo video traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Yahoo video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-video-uplnk-pkts	Description: The number of packets of Yahoo video traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Yahoo video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-video-dwlnk-pkts	Description: The number of packets of Yahoo video traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Yahoo video traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-yahoo-uplnk-bytes	Description: The number of bytes of Yahoo traffic received from MS. Triggers: Increments when a packet of Yahoo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-dwlnk-bytes	Description: The number of bytes of Yahoo traffic sent to MS. Triggers: Increments when a packet of Yahoo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-uplnk-pkts	Description: The number of packets of Yahoo traffic received from MS. Triggers: Increments when a packet of Yahoo traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-yahoo-dwlnk-pkts	Description: The number of packets of Yahoo traffic sent to MS. Triggers: Increments when a packet of Yahoo traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-yahoo-voice-uplnk-bytes	 Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Yahoo voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-voice-dwlnk-bytes	 Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Yahoo voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-voice-uplnk-pkts	 Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Yahoo voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-yahoo-voice-dwlnk-pkts	Description: The number of packets of Yahoo voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Yahoo voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-yahoo-audio-uplnk-bytes	Description: The number of bytes of Yahoo audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Yahoo audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-audio-dwlnk-bytes	Description: The number of bytes of Yahoo audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Yahoo audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-audio-uplnk-pkts	Description: The number of packets of Yahoo audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Yahoo audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-yahoo-audio-dwlnk-pkts	Description: The number of packets of Yahoo audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Yahoo audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-yahoo-non-voice-uplnk-bytes	Description: The number of bytes of Yahoo non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Yahoo non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-non-voice-dwlnk-bytes	Description: The number of bytes of Yahoo non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Yahoo non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-non-voice-uplnk-pkts	Description: The number of packets of Yahoo non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Yahoo non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-yahoo-non-voice-dwlnk-pkts	Description: The number of packets of Yahoo non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Yahoo non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-yahoo-non-audio-uplnk-bytes	Description: The number of bytes of Yahoo non-audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Yahoo non-audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-yahoo-non-audio-dwlnk-bytes	Description: The number of bytes of Yahoo non-audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Yahoo non-audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-non-audio-uplnk-pkts	Description: The number of packets of Yahoo non-audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Yahoo non-audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-yahoo-non-audio-dwlnk-pkts	Description: The number of packets of Yahoo non-audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Yahoo non-audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-yahoo-unclassified-uplnk-bytes	Description: The number of bytes of Yahoo unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Yahoo unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-unclassified-dwlnk-bytes	Description: The number of bytes of Yahoo unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Yahoo unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-yahoo-unclassified-uplnk-pkts	Description: The number of packets of Yahoo unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Yahoo unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yahoo-unclassified-dwlnk-pkts	Description: The number of packets of Yahoo unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Yahoo unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-orb-uplnk-bytes	Description: The number of bytes of ORB traffic received from MS. Triggers: Increments when a packet of ORB traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-orb-dwlnk-bytes	Description: The number of bytes of ORB traffic sent to MS. Triggers: Increments when a packet of ORB traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-orb-uplnk-pkts	Description: The number of packets of ORB traffic received from MS. Triggers: Increments when a packet of ORB traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-orb-dwlnk-pkts	Description: The number of packets of ORB traffic sent to MS. Triggers: Increments when a packet of ORB traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-winy-uplnk-bytes	Description: The number of bytes of Winny traffic received from MS. Triggers: Increments when a packet of Winny traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-winy-dwlnk-bytes	Description: The number of bytes of Winny traffic sent to MS. Triggers: Increments when a packet of Winny traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-winy-uplnk-pkts	Description: The number of packets of Winny traffic received from MS. Triggers: Increments when a packet of Winny traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-winy-dwlnk-pkts	Description: The number of packets of Winny traffic sent to MS. Triggers: Increments when a packet of Winny traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-slingbox-uplnk-bytes	Description: The number of bytes of Slingbox traffic received from MS. Triggers: Increments when a packet of Slingbox traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-slingbox-dwlnk-bytes	Description: The number of bytes of Slingbox traffic sent to MS. Triggers: Increments when a packet of Slingbox traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-slingbox-uplnk-pkts	Description: The number of packets of Slingbox traffic received from MS. Triggers: Increments when a packet of Slingbox traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-slingbox-dwlnk-pkts	Description: The number of packets of Slingbox traffic sent to MS. Triggers: Increments when a packet of Slingbox traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-fasttrack-uplnk-bytes	Description: The number of bytes of FastTrack traffic received from MS. Triggers: Increments when a packet of FastTrack traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-fasttrack-dwlnk-bytes	Description: The number of bytes of FastTrack traffic sent to MS. Triggers: Increments when a packet of FastTrack traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-fasttrack-uplnk-pkts	Description: The number of packets of FastTrack traffic received from MS. Triggers: Increments when a packet of FastTrack traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-fasttrack-dwlnk-pkts	Description: The number of packets of FastTrack traffic sent to MS. Triggers: Increments when a packet of FastTrack traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-gnutella-uplnk-bytes	Description: The number of bytes of Gnutella traffic received from MS. Triggers: Increments when a packet of Gnutella traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gnutella-dwlnk-bytes	Description: The number of bytes of Gnutella traffic sent to MS. Triggers: Increments when a packet of Gnutella traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gnutella-uplnk-pkts	Description: The number of packets of Gnutella traffic received from MS. Triggers: Increments when a packet of Gnutella traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-gnutella-dwlnk-pkts	Description: The number of packets of Gnutella traffic sent to MS. Triggers: Increments when a packet of Gnutella traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-jabber-uplnk-bytes	Description: The number of bytes of Jabber traffic received from MS. Triggers: Increments when a packet of Jabber traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-jabber-dwlnk-bytes	Description: The number of bytes of Jabber traffic sent to MS. Triggers: Increments when a packet of Jabber traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-jabber-uplnk-pkts	Description: The number of packets of Jabber traffic received from MS. Triggers: Increments when a packet of Jabber traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-jabber-dwlnk-pkts	Description: The number of packets of Jabber traffic sent to MS. Triggers: Increments when a packet of Jabber traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-manolito-uplnk-bytes	Description: The number of bytes of Manolito traffic received from MS. Triggers: Increments when a packet of Manolito traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-manolito-dwlnk-bytes	Description: The number of bytes of Manolito traffic sent to MS. Triggers: Increments when a packet of Manolito traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-manolito-uplnk-pkts	Description: The number of packets of Manolito traffic received from MS. Triggers: Increments when a packet of Manolito traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-manolito-dwlnk-pkts	Description: The number of packets of Manolito traffic sent to MS. Triggers: Increments when a packet of Manolito traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-pando-uplnk-bytes	Description: The number of bytes of Pando traffic received from MS. Triggers: Increments when a packet of Pando traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-pando-dwlnk-bytes	Description: The number of bytes of Pando traffic sent to MS. Triggers: Increments when a packet of Pando traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-pando-uplnk-pkts	Description: The number of packets of Pando traffic received from MS. Triggers: Increments when a packet of Pando traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-pando-dwlnk-pkts	Description: The number of packets of Pando traffic sent to MS. Triggers: Increments when a packet of Pando traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-filetopia-uplnk-bytes	Description: The number of bytes of Filetopia traffic received from MS. Triggers: Increments when a packet of Filetopia traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-filetopia-dwlnk-bytes	Description: The number of bytes of Filetopia traffic sent to MS. Triggers: Increments when a packet of Filetopia traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-filetopia-uplnk-pkts	Description: The number of packets of Filetopia traffic received from MS. Triggers: Increments when a packet of Filetopia traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-filetopia-dwlnk-pkts	Description: The number of packets of Filetopia traffic sent to MS. Triggers: Increments when a packet of Filetopia traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-soulseek-uplnk-bytes	Description: The number of bytes of SoulSeek traffic received from MS. Triggers: Increments when a packet of SoulSeek traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-soulseek-dwlnk-bytes	Description: The number of bytes of SoulSeek traffic sent to MS. Triggers: Increments when a packet of SoulSeek traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-soulseek-uplnk-pkts	Description: The number of packets of SoulSeek traffic received from MS. Triggers: Increments when a packet of SoulSeek traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-soulseek-dwlnk-pkts	Description: The number of packets of SoulSeek traffic sent to MS. Triggers: Increments when a packet of SoulSeek traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-ppstream-uplnk-bytes	Description: The number of bytes of PPStream traffic received from MS. Triggers: Increments when a packet of PPStream traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-ppstream-dwlnk-bytes	Description: The number of bytes of PPStream traffic sent to MS. Triggers: Increments when a packet of PPStream traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-ppstream-uplnk-pkts	Description: The number of packets of PPStream traffic received from MS. Triggers: Increments when a packet of PPStream traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-ppstream-dwlnk-pkts	Description: The number of packets of PPStream traffic sent to MS. Triggers: Increments when a packet of PPStream traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-qq-uplnk-bytes	Description: The number of bytes of QQ traffic received from MS. Triggers: Increments when a packet of QQ traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-qq-dwlnk-bytes	Description: The number of bytes of QQ traffic sent to MS. Triggers: Increments when a packet of QQ traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-qq-uplnk-pkts	Description: The number of packets of QQ traffic received from MS. Triggers: Increments when a packet of QQ traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-qq-dwlnk-pkts	Description: The number of packets of QQ traffic sent to MS. Triggers: Increments when a packet of QQ traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-qqlive-uplnk-bytes	Description: The number of bytes of QQLive traffic received from MS. Triggers: Increments when a packet of QQLive traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-qqlive-dwlnk-bytes	Description: The number of bytes of QQLive traffic sent to MS. Triggers: Increments when a packet of QQLive traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-qqlive-uplnk-pkts	Description: The number of packets of QQLive traffic received from MS. Triggers: Increments when a packet of QQLive traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-qqlive-dwlnk-pkts	Description: The number of packets of QQLive traffic sent to MS. Triggers: Increments when a packet of QQLive traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-mute-uplnk-bytes	Description: The number of bytes of Mute traffic received from MS. Triggers: Increments when a packet of Mute traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-mute-dwlnk-bytes	Description: The number of bytes of Mute traffic sent to MS. Triggers: Increments when a packet of Mute traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-mute-uplnk-pkts	Description: The number of packets of Mute traffic received from MS. Triggers: Increments when a packet of Mute traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-mute-dwlnk-pkts	Description: The number of packets of Mute traffic sent to MS. Triggers: Increments when a packet of Mute traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-gadugadu-uplnk-bytes	Description: The number of bytes of Gadu-Gadu traffic received from MS. Triggers: Increments when a packet of Gadu-Gadu traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-gadugadu-dwlnk-bytes	Description: The number of bytes of Gadu-Gadu traffic sent to MS. Triggers: Increments when a packet of Gadu-Gadu traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-gadugadu-uplnk-pkts	Description: The number of packets of Gadu-Gadu traffic received from MS. Triggers: Increments when a packet of Gadu-Gadu traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-gadugadu-dwlnk-pkts	Description: The number of packets of Gadu-Gadu traffic sent to MS. Triggers: Increments when a packet of Gadu-Gadu traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-feidian-uplnk-bytes	Description: The number of bytes of Feidian traffic received from MS. Triggers: Increments when a packet of Feidian traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-feidian-dwlnk-bytes	Description: The number of bytes of Feidian traffic sent to MS. Triggers: Increments when a packet of Feidian traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-feidian-uplnk-pkts	Description: The number of packets of Feidian traffic received from MS. Triggers: Increments when a packet of Feidian traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-feidian-dwlnk-pkts	Description: The number of packets of Feidian traffic sent to MS. Triggers: Increments when a packet of Feidian traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-applejuice-uplnk-bytes	Description: The number of bytes of AppleJuice traffic received from MS. Triggers: Increments when a packet of AppleJuice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-applejuice-dwlnk-bytes	Description: The number of bytes of AppleJuice traffic sent to MS. Triggers: Increments when a packet of AppleJuice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-applejuice-uplnk-pkts	Description: The number of packets of AppleJuice traffic received from MS. Triggers: Increments when a packet of AppleJuice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-applejuice-dwlnk-pkts	Description: The number of packets of AppleJuice traffic sent to MS. Triggers: Increments when a packet of AppleJuice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-zattoo-uplnk-bytes	Description: The number of bytes of Zattoo traffic received from MS. Triggers: Increments when a packet of Zattoo traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-zattoo-dwlnk-bytes	Description: The number of bytes of Zattoo traffic sent to MS. Triggers: Increments when a packet of Zattoo traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-zattoo-uplnk-pkts	Description: The number of packets of Zattoo traffic received from MS. Triggers: Increments when a packet of Zattoo traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-zattoo-dwlnk-pkts	Description: The number of packets of Zattoo traffic sent to MS. Triggers: Increments when a packet of Zattoo traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skinny-uplnk-bytes	Description: The number of bytes of Skinny traffic received from MS. Triggers: Increments when a packet of Skinny traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skinny-dwlnk-bytes	Description: The number of bytes of Skinny traffic sent to MS. Triggers: Increments when a packet of Skinny traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-skinny-uplnk-pkts	Description: The number of packets of Skinny traffic received from MS. Triggers: Increments when a packet of Skinny traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-skinny-dwlnk-pkts	Description: The number of packets of Skinny traffic sent to MS. Triggers: Increments when a packet of Skinny traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-sopcast-uplnk-bytes	Description: The number of bytes of SopCast traffic received from MS. Triggers: Increments when a packet of SopCast traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-sopcast-dwlnk-bytes	Description: The number of bytes of SopCast traffic sent to MS. Triggers: Increments when a packet of SopCast traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-sopcast-uplnk-pkts	Description: The number of packets of SopCast traffic received from MS. Triggers: Increments when a packet of SopCast traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-sopcast-dwlnk-pkts	Description: The number of packets of SopCast traffic sent to MS. Triggers: Increments when a packet of SopCast traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-ares-uplnk-bytes	Description: The number of bytes of Ares traffic received from MS. Triggers: Increments when a packet of Ares traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-ares-dwlnk-bytes	Description: The number of bytes of Ares traffic sent to MS. Triggers: Increments when a packet of Ares traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-ares-uplnk-pkts	Description: The number of packets of Ares traffic received from MS. Triggers: Increments when a packet of Ares traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-ares-dwlnk-pkts	Description: The number of packets of Ares traffic sent to MS. Triggers: Increments when a packet of Ares traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-directconnect-uplnk-bytes	Description: The number of bytes of DirectConnect traffic received from MS. Triggers: Increments when a packet of DirectConnect traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-directconnect-dwlnk-bytes	Description: The number of bytes of DirectConnect traffic sent to MS. Triggers: Increments when a packet of DirectConnect traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-directconnect-uplnk-pkts	Description: The number of packets of DirectConnect traffic received from MS. Triggers: Increments when a packet of DirectConnect traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-directconnect-dwlnk-pkts	Description: The number of packets of DirectConnect traffic sent to MS. Triggers: Increments when a packet of DirectConnect traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-imesh-uplnk-bytes	Description: The number of bytes of iMesh traffic received from MS. Triggers: Increments when a packet of iMesh traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-imesh-dwlnk-bytes	Description: The number of bytes of iMesh traffic sent to MS. Triggers: Increments when a packet of iMesh traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-imesh-uplnk-pkts	Description: The number of packets of iMesh traffic received from MS. Triggers: Increments when a packet of iMesh traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-imesh-dwlnk-pkts	Description: The number of packets of iMesh traffic sent to MS. Triggers: Increments when a packet of iMesh traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-pplive-uplnk-bytes	Description: The number of bytes of PPLive traffic received from MS. Triggers: Increments when a packet of PPLive traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-pplive-dwlnk-bytes	Description: The number of bytes of PPLive traffic sent to MS. Triggers: Increments when a packet of PPLive traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-pplive-uplnk-pkts	Description: The number of packets of PPLive traffic received from MS. Triggers: Increments when a packet of PPLive traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-pplive-dwlnk-pkts	Description: The number of packets of PPLive traffic sent to MS. Triggers: Increments when a packet of PPLive traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-uplnk-bytes	Description: The number of bytes of Oscar traffic received from MS. Triggers: Increments when a packet of Oscar traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-dwlnk-bytes	Description: The number of bytes of Oscar traffic sent to MS. Triggers: Increments when a packet of Oscar traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-uplnk-pkts	Description: The number of packets of Oscar traffic received from MS. Triggers: Increments when a packet of Oscar traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-dwlnk-pkts	Description: The number of packets of Oscar traffic sent to MS. Triggers: Increments when a packet of Oscar traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-voice-uplnk-bytes	Description: The number of bytes of Oscar voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Oscar voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-oscar-voice-dwlnk-bytes	Description: The number of bytes of Oscar voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Oscar voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-voice-uplnk-pkts	Description: The number of packets of Oscar voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Oscar voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-voice-dwlnk-pkts	Description: The number of packets of Oscar voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Oscar voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-audio-uplnk-bytes	Description: The number of bytes of Oscar audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Oscar audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-audio-dwlnk-bytes	Description: The number of bytes of Oscar audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Oscar audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-audio-uplnk-pkts	Description: The number of packets of Oscar audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Oscar audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-oscar-audio-dwlnk-pkts	Description: The number of packets of Oscar audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of Oscar audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-non-voice-uplnk-bytes	Description: The number of bytes of Oscar non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Oscar non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-non-voice-dwlnk-bytes	Description: The number of bytes of Oscar non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Oscar non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-non-voice-uplnk-pkts	Description: The number of packets of Oscar non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Oscar non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-non-voice-dwlnk-pkts	Description: The number of packets of Oscar non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of Oscar non-voice traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-oscar-non-audio-uplnk-bytes	Description: The number of bytes of Oscar non-audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Oscar non-audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-non-audio-dwlnk-bytes	Description: The number of bytes of Oscar non-audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Oscar non-audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-non-audio-uplnk-pkts	Description: The number of packets of Oscar non-audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Oscar non-audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-non-audio-dwlnk-pkts	Description: The number of packets of Oscar non-audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of Oscar non-audio traffic is detected by the P2P analyzer. Availability: Per Active Charging Service.	Int64
p2p-oscar-unclassified-uplnk-bytes	Description: The number of bytes of Oscar unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Oscar unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-oscar-unclassified-dwlnk-bytes	Description: The number of bytes of Oscar unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Oscar unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-oscar-unclassified-uplnk-pkts	Description: The number of packets of Oscar unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Oscar unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-oscar-unclassified-dwlnk-pkts	Description: The number of packets of Oscar unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of Oscar unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-popo-uplnk-bytes	Description: The number of bytes of PoPo traffic received from MS. Triggers: Increments when a packet of PoPo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-popo-dwlnk-bytes	Description: The number of bytes of PoPo traffic sent to MS. Triggers: Increments when a packet of PoPo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-popo-uplnk-pkts	Description: The number of packets of PoPo traffic received from MS. Triggers: Increments when a packet of PoPo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-popo-dwlnk-pkts	Description: The number of packets of PoPo traffic sent to MS. Triggers: Increments when a packet of PoPo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-irc-uplnk-bytes	Description: The number of bytes of IRC traffic received from MS. Triggers: Increments when a packet of IRC traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-irc-dwlnk-bytes	Description: The number of bytes of IRC traffic sent to MS. Triggers: Increments when a packet of IRC traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-irc-uplnk-pkts	Description: The number of packets of IRC traffic received from MS. Triggers: Increments when a packet of IRC traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-irc-dwlnk-pkts	Description: The number of packets of IRC traffic sent to MS. Triggers: Increments when a packet of IRC traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-steam-uplnk-bytes	Description: The number of bytes of Steam traffic received from MS. Triggers: Increments when a packet of Steam traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-steam-dwlnk-bytes	Description: The number of bytes of Steam traffic sent to MS. Triggers: Increments when a packet of Steam traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-steam-uplnk-pkts	Description: The number of packets of Steam traffic received from MS. Triggers: Increments when a packet of Steam traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-steam-dwlnk-pkts	Description: The number of packets of Steam traffic sent to MS. Triggers: Increments when a packet of Steam traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ddlink-uplnk-bytes	Description: The number of bytes of Ddlink traffic received from MS. Triggers: Increments when a packet of Ddlink traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ddlink-dwlnk-bytes	Description: The number of bytes of Ddlink traffic sent to MS. Triggers: Increments when a packet of Ddlink traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ddlink-uplnk-pkts	Description: The number of packets of Ddlink traffic received from MS. Triggers: Increments when a packet of Ddlink traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ddlink-dwlnk-pkts	Description: The number of packets of Ddlink traffic sent to MS. Triggers: Increments when a packet of Ddlink traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-half-life2-uplnk-bytes	Description: The number of bytes of Half-life2 traffic received from MS. Triggers: Increments when a packet of Half-life2 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-half-life2-dwlnk-bytes	Description: The number of bytes of Half-life2 traffic sent to MS. Triggers: Increments when a packet of Half-life2 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-half-life2-uplnk-pkts	Description: The number of packets of Half-life2 traffic received from MS. Triggers: Increments when a packet of Half-life2 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-half-life2-dwlnk-pkts	Description: The number of packets of Half-life2 traffic sent to MS. Triggers: Increments when a packet of Half-life2 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-hamachivpn-uplnk-bytes	Description: The number of bytes of HamachiVPN traffic received from MS. Triggers: Increments when a packet of HamachiVPN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-hamachivpn-dwlnk-bytes	Description: The number of bytes of HamachiVPN traffic sent to MS. Triggers: Increments when a packet of HamachiVPN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-hamachivpn-uplnk-pkts	Description: The number of packets of HamachiVPN traffic received from MS. Triggers: Increments when a packet of HamachiVPN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-hamachivpn-dwlnk-pkts	Description: The number of packets of HamachiVPN traffic sent to MS. Triggers: Increments when a packet of HamachiVPN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tvants-uplnk-bytes	Description: The number of bytes of TVAnts traffic received from MS. Triggers: Increments when a packet of TVAnts traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tvants-dwlnk-bytes	Description: The number of bytes of TVAnts traffic sent to MS. Triggers: Increments when a packet of TVAnts traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tvants-uplnk-pkts	Description: The number of packets of TVAnts traffic received from MS. Triggers: Increments when a packet of TVAnts traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-tvants-dwlnk-pkts	Description: The number of packets of TVAnts traffic sent to MS. Triggers: Increments when a packet of TVAnts traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tvuplayer-uplnk-bytes	Description: The number of bytes of TVUPlayer traffic received from MS. Triggers: Increments when a packet of TVUPlayer traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tvuplayer-dwlnk-bytes	Description: The number of bytes of TVUPlayer traffic sent to MS. Triggers: Increments when a packet of TVUPlayer traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tvuplayer-uplnk-pkts	Description: The number of packets of TVUPlayer traffic received from MS. Triggers: Increments when a packet of TVUPlayer traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tvuplayer-dwlnk-pkts	Description: The number of packets of TVUPlayer traffic sent to MS. Triggers: Increments when a packet of TVUPlayer traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-uusee-uplnk-bytes	Description: The number of bytes of UUSEE traffic received from MS. Triggers: Increments when a packet of UUSEE traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-uusee-dwlnk-bytes	Description: The number of bytes of UUSEE traffic sent to MS. Triggers: Increments when a packet of UUSEE traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-uusee-uplnk-pkts	Description: The number of packets of UUSEE traffic received from MS. Triggers: Increments when a packet of UUSEE traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-uusee-dwlnk-pkts	Description: The number of packets of UUSEE traffic sent to MS. Triggers: Increments when a packet of UUSEE traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-vpnx-uplnk-bytes	Description: The number of bytes of VPN-X traffic received from MS. Triggers: Increments when a packet of VPN-X traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-vpnx-dwlnk-bytes	Description: The number of bytes of VPN-X traffic sent to MS. Triggers: Increments when a packet of VPN-X traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-vpnx-uplnk-pkts	Description: The number of packets of VPN-X traffic received from MS. Triggers: Increments when a packet of VPN-X traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-vpnx-dwlnk-pkts	Description: The number of packets of VPN-X traffic sent to MS. Triggers: Increments when a packet of VPN-X traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-vtun-uplnk-bytes	Description: The number of bytes of VTun traffic received from MS. Triggers: Increments when a packet of VTun traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-vtun-dwlnk-bytes	Description: The number of bytes of VTun traffic sent to MS. Triggers: Increments when a packet of VTun traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-vtun-uplnk-pkts	Description: The number of packets of VTun traffic received from MS. Triggers: Increments when a packet of VTun traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-vtun-dwlnk-pkts	Description: The number of packets of VTun traffic sent to MS. Triggers: Increments when a packet of VTun traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-winmx-uplnk-bytes	Description: The number of bytes of WinMX traffic received from MS. Triggers: Increments when a packet of WinMX traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-winmx-dwlnk-bytes	Description: The number of bytes of WinMX traffic sent to MS. Triggers: Increments when a packet of WinMX traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-winmx-uplnk-pkts	Description: The number of packets of WinMX traffic received from MS. Triggers: Increments when a packet of WinMX traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-winmx-dwlnk-pkts	Description: The number of packets of WinMX traffic sent to MS. Triggers: Increments when a packet of WinMX traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wofwarcraft-uplnk-bytes	Description: The number of bytes of WofWarcraft traffic received from MS. Triggers: Increments when a packet of WofWarcraft traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-wofwarcraft-dwlnk-bytes	Description: The number of bytes of WofWarcraft traffic sent to MS. Triggers: Increments when a packet of WofWarcraft traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wofwarcraft-uplnk-pkts	Description: The number of packets of WofWarcraft traffic received from MS. Triggers: Increments when a packet of WofWarcraft traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wofwarcraft-dwlnk-pkts	Description: The number of packets of WofWarcraft traffic sent to MS. Triggers: Increments when a packet of WofWarcraft traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-xbox-uplnk-bytes	Description: The number of bytes of Xbox traffic received from MS. Triggers: Increments when a packet of Xbox traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-xbox-dwlnk-bytes	Description: The number of bytes of Xbox traffic sent to MS. Triggers: Increments when a packet of Xbox traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-xbox-uplnk-pkts	Description: The number of packets of Xbox traffic received from MS. Triggers: Increments when a packet of Xbox traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-xbox-dwlnk-pkts	Description: The number of packets of Xbox traffic sent to MS. Triggers: Increments when a packet of Xbox traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-fring-uplnk-bytes	Description: The number of bytes of Fring traffic received from MS. Triggers: Increments when a packet of Fring traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-fring-dwlnk-bytes	Description: The number of bytes of Fring traffic sent to MS. Triggers: Increments when a packet of Fring traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-fring-uplnk-pkts	Description: The number of packets of Fring traffic received from MS. Triggers: Increments when a packet of Fring traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-fring-dwlnk-pkts	Description: The number of packets of Fring traffic sent to MS. Triggers: Increments when a packet of Fring traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-iskoot-uplnk-bytes	Description: The number of bytes of iSkoot traffic received from MS. Triggers: Increments when a packet of iSkoot traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iskoot-dwlnk-bytes	Description: The number of bytes of iSkoot traffic sent to MS. Triggers: Increments when a packet of iSkoot traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iskoot-uplnk-pkts	Description: The number of packets of iSkoot traffic received from MS. Triggers: Increments when a packet of iSkoot traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iskoot-dwlnk-pkts	Description: The number of packets of iSkoot traffic sent to MS. Triggers: Increments when a packet of iSkoot traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-oofoo-uplnk-bytes	Description: The number of bytes of ooVoo traffic received from MS. Triggers: Increments when a packet of ooVoo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-oofoo-dwlnk-bytes	Description: The number of bytes of ooVoo traffic sent to MS. Triggers: Increments when a packet of ooVoo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-oofoo-uplnk-pkts	Description: The number of packets of ooVoo traffic received from MS. Triggers: Increments when a packet of ooVoo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-oofoo-dwlnk-pkts	Description: The number of packets of ooVoo traffic sent to MS. Triggers: Increments when a packet of ooVoo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-uplnk-bytes	Description: The number of bytes of GTalk traffic received from MS. Triggers: Increments when a packet of GTalk traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-dwlnk-bytes	Description: The number of bytes of GTalk traffic sent to MS. Triggers: Increments when a packet of GTalk traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-uplnk-pkts	Description: The number of packets of GTalk traffic received from MS. Triggers: Increments when a packet of GTalk traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-gtalk-dwlnk-pkts	Description: The number of packets of GTalk traffic sent to MS. Triggers: Increments when a packet of GTalk traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-voice-uplnk-bytes	Description: The number of bytes of GTalk voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of GTalk voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-voice-dwlnk-bytes	Description: The number of bytes of GTalk voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of GTalk voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-voice-uplnk-pkts	Description: The number of packets of GTalk voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of GTalk voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-voice-dwlnk-pkts	Description: The number of packets of GTalk voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of GTalk voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-gtalk-audio-uplnk-bytes	Description: The number of bytes of GTalk audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of GTalk audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-audio-dwlnk-bytes	Description: The number of bytes of GTalk audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of GTalk audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-audio-uplnk-pkts	Description: The number of packets of GTalk audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of GTalk audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-audio-dwlnk-pkts	Description: The number of packets of GTalk audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0 and later releases. Triggers: Increments when a packet of GTalk audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-non-voice-uplnk-bytes	Description: The number of bytes of GTalk non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of GTalk non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-gtalk-non-voice-dwlnk-bytes	Description: The number of bytes of GTalk non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of GTalk non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-non-voice-uplnk-pkts	Description: The number of packets of GTalk non-voice traffic received from MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of GTalk non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-non-voice-dwlnk-pkts	Description: The number of packets of GTalk non-voice traffic sent to MS.  Important: This variable is supported only in StarOS 10.0 and earlier releases. Triggers: Increments when a packet of GTalk non-voice traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-non-audio-uplnk-bytes	Description: The number of bytes of GTalk non-audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of GTalk non-audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-non-audio-dwlnk-bytes	Description: The number of bytes of GTalk non-audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of GTalk non-audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-gtalk-non-audio-uplnk-pkts	Description: The number of packets of GTalk non-audio traffic received from MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of GTalk non-audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-non-audio-dwlnk-pkts	Description: The number of packets of GTalk non-audio traffic sent to MS.  Important: This variable is supported only in StarOS 11.0. Triggers: Increments when a packet of GTalk non-audio traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-unclassified-uplnk-bytes	Description: The number of bytes of GTalk unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of GTalk unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-unclassified-dwlnk-bytes	Description: The number of bytes of GTalk unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of GTalk unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gtalk-unclassified-uplnk-pkts	Description: The number of packets of GTalk unclassified traffic received from MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of GTalk unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-gtalk- unclassified-dwlnk- pkts	Description: The number of packets of GTalk unclassified traffic sent to MS.  Important: This variable is supported only in StarOS 12.0 and later releases. Triggers: Increments when a packet of GTalk unclassified traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-freenet-uplnk- bytes	Description: The total number of bytes of Freenet traffic received from MS. Triggers: Increments when a packet of Freenet traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-freenet-dwlnk- bytes	Description: The total number of bytes of Freenet traffic sent to MS. Triggers: Increments when a packet of Freenet traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-freenet-uplnk- pkts	Description: The total number of packets of Freenet traffic received from MS. Triggers: Increments when a packet of Freenet traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-freenet-dwlnk- pkts	Description: The total number of packets of Freenet traffic sent to MS. Triggers: Increments when a packet of Freenet traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-aimini-uplnk- bytes	Description: The total number of bytes of Aimini traffic received from MS. Triggers: Increments when a packet of Aimini traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-aimini-dwlnk- bytes	Description: The total number of bytes of Aimini traffic sent to MS. Triggers: Increments when a packet of Aimini traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-aimini-uplnk-pkts	Description: The total number of packets of Aimini traffic received from MS. Triggers: Increments when a packet of Aimini traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-aimini-dwlnk- pkts	Description: The total number of packets of Aimini traffic sent to MS. Triggers: Increments when a packet of Aimini traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-battlefld-uplnk- bytes	Description: The total number of bytes of Battlefield traffic received from MS. Triggers: Increments when a packet of Battlefield traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-battlefld-dwlnk-bytes	Description: The total number of bytes of Battlefield traffic sent to MS. Triggers: Increments when a packet of Battlefield traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-battlefld-uplnk-pkts	Description: The total number of packets of Battlefield traffic received from MS. Triggers: Increments when a packet of Battlefield traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-battlefld-dwlnk-pkts	Description: The total number of packets of Battlefield traffic sent to MS. Triggers: Increments when a packet of Battlefield traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-openft-uplnk-bytes	Description: The total number of bytes of OpenFT traffic received from MS. Triggers: Increments when a packet of OpenFT traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-openft-dwlnk-bytes	Description: The total number of bytes of OpenFT traffic sent to MS. Triggers: Increments when a packet of OpenFT traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-openft-uplnk-pkts	Description: The total number of packets of OpenFT traffic received from MS. Triggers: Increments when a packet of OpenFT traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-openft-dwlnk-pkts	Description: The total number of packets of OpenFT traffic sent to MS. Triggers: Increments when a packet of OpenFT traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-qqgame-uplnk-bytes	Description: The total number of bytes of QQGame traffic received from MS. Triggers: Increments when a packet of QQGame traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-qqgame-dwlnk-bytes	Description: The total number of bytes of QQGame traffic sent to MS. Triggers: Increments when a packet of QQGame traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-qqgame-uplnk-pkts	Description: The total number of packets of QQGame traffic received from MS. Triggers: Increments when a packet of QQGame traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-qqgame-dwlnk-pkts	Description: The total number of packets of QQGame traffic sent to MS. Triggers: Increments when a packet of QQGame traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-quake-uplnk-bytes	Description: The total number of bytes of Quake traffic received from MS. Triggers: Increments when a packet of Quake traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-quake-dwlnk-bytes	Description: The total number of bytes of Quake traffic sent to MS. Triggers: Increments when a packet of Quake traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-quake-uplnk-pkts	Description: The total number of packets of Quake traffic received from MS. Triggers: Increments when a packet of Quake traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-quake-dwlnk-pkts	Description: The total number of packets of Quake traffic sent to MS. Triggers: Increments when a packet of Quake traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-secondlife-uplnk-bytes	Description: The total number of bytes of SecondLife traffic received from MS. Triggers: Increments when a packet of SecondLife traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-secondlife-dwlnk-bytes	Description: The total number of bytes of SecondLife traffic sent to MS. Triggers: Increments when a packet of SecondLife traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-secondlife-uplnk-pkts	Description: The total number of packets of SecondLife traffic received from MS. Triggers: Increments when a packet of SecondLife traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-secondlife-dwlnk-pkts	Description: The total number of packets of SecondLife traffic sent to MS. Triggers: Increments when a packet of SecondLife traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-actsync-uplnk-bytes	Description: The total number of bytes of ActiveSync traffic received from MS. Triggers: Increments when a packet of ActiveSync traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-actsync-dwlnk-bytes	Description: The total number of bytes of ActiveSync traffic sent to MS. Triggers: Increments when a packet of ActiveSync traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-actsync-uplnk-pkts	Description: The total number of packets of ActiveSync traffic received from MS. Triggers: Increments when a packet of ActiveSync traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-actsync-dwlnk-pkts	Description: The total number of packets of ActiveSync traffic sent to MS. Triggers: Increments when a packet of ActiveSync traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-nimbuzz-uplnk-bytes	Description: The total number of bytes of Nimbuzz traffic received from MS. Triggers: Increments when a packet of Nimbuzz traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-nimbuzz-dwlnk-bytes	Description: The total number of bytes of Nimbuzz traffic sent to MS. Triggers: Increments when a packet of Nimbuzz traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-nimbuzz-uplnk-pkts	Description: The total number of packets of Nimbuzz traffic received from MS. Triggers: Increments when a packet of Nimbuzz traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-nimbuzz-dwlnk-pkts	Description: The total number of packets of Nimbuzz traffic sent to MS. Triggers: Increments when a packet of Nimbuzz traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iax-uplnk-bytes	Description: The total number of bytes of IAX traffic received from MS. Triggers: Increments when a packet of IAX traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iax-dwlnk-bytes	Description: The total number of bytes of IAX traffic sent to MS. Triggers: Increments when a packet of IAX traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iax-uplnk-pkts	Description: The total number of packets of IAX traffic received from MS. Triggers: Increments when a packet of IAX traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iax-dwlnk-pkts	Description: The total number of packets of IAX traffic sent to MS. Triggers: Increments when a packet of IAX traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-paltalk-uplnk-bytes	Description: The total number of bytes of Paltalk traffic received from MS. Triggers: Increments when a packet of Paltalk traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-paltalk-dwlnk-bytes	Description: The total number of bytes of Paltalk traffic sent to MS. Triggers: Increments when a packet of Paltalk traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-paltalk-uplnk-pkts	Description: The total number of packets of Paltalk traffic received from MS. Triggers: Increments when a packet of Paltalk traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-paltalk-dwlnk-pkts	Description: The total number of packets of Paltalk traffic sent to MS. Triggers: Increments when a packet of Paltalk traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-warcraft3-uplnk-bytes	Description: The total number of bytes of Warcraft3 traffic received from MS. Triggers: Increments when a packet of Warcraft3 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-warcraft3-dwlnk-bytes	Description: The total number of bytes of Warcraft3 traffic sent to MS. Triggers: Increments when a packet of Warcraft3 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-warcraft3-uplnk-pkts	Description: The total number of packets of Warcraft3 traffic received from MS. Triggers: Increments when a packet of Warcraft3 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-warcraft3-dwlnk-pkts	Description: The total number of packets of Warcraft3 traffic sent to MS. Triggers: Increments when a packet of Warcraft3 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rdp-uplnk-bytes	Description: The total number of bytes of RDP traffic received from MS. Triggers: Increments when a packet of RDP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rdp-dwlnk-bytes	Description: The total number of bytes of RDP traffic sent to MS. Triggers: Increments when a packet of RDP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rdp-uplnk-pkts	Description: The total number of packets of RDP traffic received from MS. Triggers: Increments when a packet of RDP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rdp-dwlnk-pkts	Description: The total number of packets of RDP traffic sent to MS. Triggers: Increments when a packet of RDP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iptv-uplnk-bytes	Description: The total number of bytes of IPTV traffic received from MS. Triggers: Increments when a packet of IPTV traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-iptv-dwlnk-bytes	Description: The total number of bytes of IPTV traffic sent to MS. Triggers: Increments when a packet of IPTV traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iptv-uplnk-pkts	Description: The total number of packets of IPTV traffic received from MS. Triggers: Increments when a packet of IPTV traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-iptv-dwlnk-pkts	Description: The total number of packets of IPTV traffic sent to MS. Triggers: Increments when a packet of IPTV traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-pandora-uplnk-bytes	Description: The total number of bytes of Pandora traffic received from MS. Triggers: Increments when a packet of Pandora traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-pandora-dwlnk-bytes	Description: The total number of bytes of Pandora traffic sent to MS. Triggers: Increments when a packet of Pandora traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-pandora-uplnk-pkts	Description: The total number of packets of Pandora traffic received from MS. Triggers: Increments when a packet of Pandora traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-pandora-dwlnk-pkts	Description: The total number of packets of Pandora traffic sent to MS. Triggers: Increments when a packet of Pandora traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-icecast-uplnk-bytes	Description: The total number of bytes of Icecast traffic received from MS. Triggers: Increments when a packet of Icecast traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-icecast-dwlnk-bytes	Description: The total number of bytes of Icecast traffic sent to MS. Triggers: Increments when a packet of Icecast traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-icecast-uplnk-pkts	Description: The total number of packets of Icecast traffic received from MS. Triggers: Increments when a packet of Icecast traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-icecast-dwlnk-pkts	Description: The total number of packets of Icecast traffic sent to MS. Triggers: Increments when a packet of Icecast traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-kontiki-uplnk-bytes	Description: The total number of bytes of Kontiki traffic received from MS. Triggers: Increments when a packet of Kontiki traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-kontiki-dwlnk-bytes	Description: The total number of bytes of Kontiki traffic sent to MS. Triggers: Increments when a packet of Kontiki traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-kontiki-uplnk-pkts	Description: The total number of packets of Kontiki traffic received from MS. Triggers: Increments when a packet of Kontiki traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-kontiki-dwlnk-pkts	Description: The total number of packets of Kontiki traffic sent to MS. Triggers: Increments when a packet of Kontiki traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-meebo-uplnk-bytes	Description: The total number of bytes of Meebo traffic received from MS. Triggers: Increments when a packet of Meebo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-meebo-dwlnk-bytes	Description: The total number of bytes of Meebo traffic sent to MS. Triggers: Increments when a packet of Meebo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-meebo-uplnk-pkts	Description: The total number of packets of Meebo traffic received from MS. Triggers: Increments when a packet of Meebo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-meebo-dwlnk-pkts	Description: The total number of packets of Meebo traffic sent to MS. Triggers: Increments when a packet of Meebo traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-shoutcast-uplnk-bytes	Description: The total number of bytes of Shoutcast traffic received from MS. Triggers: Increments when a packet of Shoutcast traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-shoutcast-dwlnk-bytes	Description: The total number of bytes of Shoutcast traffic sent to MS. Triggers: Increments when a packet of Shoutcast traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-shoutcast-uplnk-pkts	Description: The total number of packets of Shoutcast traffic received from MS. Triggers: Increments when a packet of Shoutcast traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-shoutcast-dwlnk-pkts	Description: The total number of packets of Shoutcast traffic sent to MS. Triggers: Increments when a packet of Shoutcast traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-truphone-uplnk-bytes	Description: The total number of bytes of Truphone traffic received from MS. Triggers: Increments when a packet of Truphone traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-truphone-dwlnk-bytes	Description: The total number of bytes of Truphone traffic sent to MS. Triggers: Increments when a packet of Truphone traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-truphone-uplnk-pkts	Description: The total number of packets of Truphone traffic received from MS. Triggers: Increments when a packet of Truphone traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-truphone-dwlnk-pkts	Description: The total number of packets of Truphone traffic sent to MS. Triggers: Increments when a packet of Truphone traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-thunder-uplnk-bytes	Description: The total number of bytes of Thunder traffic received from MS. Triggers: Increments when a packet of Thunder traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-thunder-dwlnk-bytes	Description: The total number of bytes of Thunder traffic sent to MS. Triggers: Increments when a packet of Thunder traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-thunder-uplnk-pkts	Description: The total number of packets of Thunder traffic received from MS. Triggers: Increments when a packet of Thunder traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-thunder-dwlnk-pkts	Description: The total number of packets of Thunder traffic sent to MS. Triggers: Increments when a packet of Thunder traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-armagettron-uplnk-bytes	Description: The total number of bytes of Armagettron traffic received from MS. Triggers: Increments when a packet of Armagettron traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-armagettron-dwlnk-bytes	Description: The total number of bytes of Armagettron traffic sent to MS. Triggers: Increments when a packet of Armagettron traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-armagettron-uplnk-pkts	Description: The total number of packets of Armagettron traffic received from MS. Triggers: Increments when a packet of Armagettron traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-armagettron-dwlnk-pkts	Description: The total number of packets of Armagettron traffic sent to MS. Triggers: Increments when a packet of Armagettron traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-blackberry-uplnk-bytes	Description: The total number of bytes of Blackberry traffic received from MS. Triggers: Increments when a packet of Blackberry traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-blackberry-dwlnk-bytes	Description: The total number of bytes of Blackberry traffic sent to MS. Triggers: Increments when a packet of Blackberry traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-blackberry-uplnk-pkts	Description: The total number of packets of Blackberry traffic received from MS. Triggers: Increments when a packet of Blackberry traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-blackberry-dwlnk-pkts	Description: The total number of packets of Blackberry traffic sent to MS. Triggers: Increments when a packet of Blackberry traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-citrix-uplnk-bytes	Description: The total number of bytes of Citrix traffic received from MS. Triggers: Increments when a packet of Citrix traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-citrix-dwlnk-bytes	Description: The total number of bytes of Citrix traffic sent to MS. Triggers: Increments when a packet of Citrix traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-citrix-uplnk-pkts	Description: The total number of packets of Citrix traffic received from MS. Triggers: Increments when a packet of Citrix traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-citrix-dwlnk-pkts	Description: The total number of packets of Citrix traffic sent to MS. Triggers: Increments when a packet of Citrix traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-clubpenguin-uplnk-bytes	Description: The total number of bytes of Clubpenguin traffic received from MS. Triggers: Increments when a packet of Clubpenguin traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-clubpenguin-dwlnk-bytes	Description: The total number of bytes of Clubpenguin traffic sent to MS. Triggers: Increments when a packet of Clubpenguin traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-clubpenguin-uplnk-pkts	Description: The total number of packets of Clubpenguin traffic received from MS. Triggers: Increments when a packet of Clubpenguin traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-clubpenguin-dwlnk-pkts	Description: The total number of packets of Clubpenguin traffic sent to MS. Triggers: Increments when a packet of Clubpenguin traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-crossfire-uplnk-bytes	Description: The total number of bytes of Crossfire traffic received from MS. Triggers: Increments when a packet of Crossfire traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-crossfire-dwlnk-bytes	Description: The total number of bytes of Crossfire traffic sent to MS. Triggers: Increments when a packet of Crossfire traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-crossfire-uplnk-pkts	Description: The total number of packets of Crossfire traffic received from MS. Triggers: Increments when a packet of Crossfire traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-crossfire-dwlnk-pkts	Description: The total number of packets of Crossfire traffic sent to MS. Triggers: Increments when a packet of Crossfire traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-dofus-uplnk-bytes	Description: The total number of bytes of Dofus traffic received from MS. Triggers: Increments when a packet of Dofus traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-dofus-dwlnk-bytes	Description: The total number of bytes of Dofus traffic sent to MS. Triggers: Increments when a packet of Dofus traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-dofus-uplnk-pkts	Description: The total number of packets of Dofus traffic received from MS. Triggers: Increments when a packet of Dofus traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-dofus-dwlnk-pkts	Description: The total number of packets of Dofus traffic sent to MS. Triggers: Increments when a packet of Dofus traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-fiesta-uplnk-bytes	Description: The total number of bytes of Fiesta traffic received from MS. Triggers: Increments when a packet of Fiesta traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-fiesta-dwlnk-bytes	Description: The total number of bytes of Fiesta traffic sent to MS. Triggers: Increments when a packet of Fiesta traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-fiesta-uplnk-pkts	Description: The total number of packets of Fiesta traffic received from MS. Triggers: Increments when a packet of Fiesta traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-fiesta-dwlnk-pkts	Description: The total number of packets of Fiesta traffic sent to MS. Triggers: Increments when a packet of Fiesta traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-florensia-uplnk-bytes	Description: The total number of bytes of Florensia traffic received from MS. Triggers: Increments when a packet of Florensia traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-florensia-dwlnk-bytes	Description: The total number of bytes of Florensia traffic sent to MS. Triggers: Increments when a packet of Florensia traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-florensia-uplnk-pkts	Description: The total number of packets of Florensia traffic received from MS. Triggers: Increments when a packet of Florensia traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-florensia-dwlnk-pkts	Description: The total number of packets of Florensia traffic sent to MS. Triggers: Increments when a packet of Florensia traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-funshion-uplnk-bytes	Description: The total number of bytes of Funshion traffic received from MS. Triggers: Increments when a packet of Funshion traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-funshion-dwlnk-bytes	Description: The total number of bytes of Funshion traffic sent to MS. Triggers: Increments when a packet of Funshion traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-funshion-uplnk-pkts	Description: The total number of packets of Funshion traffic received from MS. Triggers: Increments when a packet of Funshion traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-funshion-dwlnk-pkts	Description: The total number of packets of Funshion traffic sent to MS. Triggers: Increments when a packet of Funshion traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-guildwars-uplnk-bytes	Description: The total number of bytes of Guildwars traffic received from MS. Triggers: Increments when a packet of Guildwars traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-guildwars-dwlnk-bytes	Description: The total number of bytes of Guildwars traffic sent to MS. Triggers: Increments when a packet of Guildwars traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-guildwars-uplnk-pkts	Description: The total number of packets of Guildwars traffic received from MS. Triggers: Increments when a packet of Guildwars traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-guildwars-dwlnk-pkts	Description: The total number of packets of Guildwars traffic sent to MS. Triggers: Increments when a packet of Guildwars traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-isakmp-uplnk-bytes	Description: The total number of bytes of ISAKMP traffic received from MS. Triggers: Increments when a packet of ISAKMP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-isakmp-dwlnk-bytes	Description: The total number of bytes of ISAKMP traffic sent to MS. Triggers: Increments when a packet of ISAKMP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-isakmp-uplnk-pkts	Description: The total number of packets of ISAKMP traffic received from MS. Triggers: Increments when a packet of ISAKMP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-isakmp-dwlnk-pkts	Description: The total number of packets of ISAKMP traffic sent to MS. Triggers: Increments when a packet of ISAKMP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-maplestory-uplnk-bytes	Description: The total number of bytes of Maplestory traffic received from MS. Triggers: Increments when a packet of Maplestory traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-maplestory-dwlnk-bytes	Description: The total number of bytes of Maplestory traffic sent to MS. Triggers: Increments when a packet of Maplestory traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-maplestory-uplnk-pkts	Description: The total number of packets of Maplestory traffic received from MS. Triggers: Increments when a packet of Maplestory traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-maplestory-dwlnk-pkts	Description: The total number of packets of Maplestory traffic sent to MS. Triggers: Increments when a packet of Maplestory traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-mgcp-uplnk-bytes	Description: The total number of bytes of MGCP traffic received from MS. Triggers: Increments when a packet of MGCP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-mgcp-dwlnk-bytes	Description: The total number of bytes of MGCP traffic sent to MS. Triggers: Increments when a packet of MGCP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-mgcp-uplnk-pkts	Description: The total number of packets of MGCP traffic received from MS. Triggers: Increments when a packet of MGCP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-mgcp-dwlnk-pkts	Description: The total number of packets of MGCP traffic sent to MS. Triggers: Increments when a packet of MGCP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-octoshape-uplnk-bytes	Description: The total number of bytes of Octoshape traffic received from MS. Triggers: Increments when a packet of Octoshape traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-octoshape-dwlnk-bytes	Description: The total number of bytes of Octoshape traffic sent to MS. Triggers: Increments when a packet of Octoshape traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-octoshape-uplnk-pkts	Description: The total number of packets of Octoshape traffic received from MS. Triggers: Increments when a packet of Octoshape traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-octoshape-dwlnk-pkts	Description: The total number of packets of Octoshape traffic sent to MS. Triggers: Increments when a packet of Octoshape traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-off-uplnk-bytes	Description: The total number of bytes of Off traffic received from MS. Triggers: Increments when a packet of Off traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-off-dwlnk-bytes	Description: The total number of bytes of Off traffic sent to MS. Triggers: Increments when a packet of Off traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-off-uplnk-pkts	Description: The total number of packets of Off traffic received from MS. Triggers: Increments when a packet of Off traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-off-dwlnk-pkts	Description: The total number of packets of Off traffic sent to MS. Triggers: Increments when a packet of Off traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ps3-uplnk-bytes	Description: The total number of bytes of PS3 traffic received from MS. Triggers: Increments when a packet of PS3 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ps3-dwlnk-bytes	Description: The total number of bytes of PS3 traffic sent to MS. Triggers: Increments when a packet of PS3 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ps3-uplnk-pkts	Description: The total number of packets of PS3 traffic received from MS. Triggers: Increments when a packet of PS3 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ps3-dwlnk-pkts	Description: The total number of packets of PS3 traffic sent to MS. Triggers: Increments when a packet of PS3 traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rmstream-uplnk-bytes	Description: The total number of bytes of Real Media Stream traffic received from MS. Triggers: Increments when a packet of Real Media Stream traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rmstream-dwlnk-bytes	Description: The total number of bytes of Real Media Stream traffic sent to MS. Triggers: Increments when a packet of Real Media Stream traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rmstream-uplnk-pkts	Description: The total number of packets of Real Media Stream traffic received from MS. Triggers: Increments when a packet of Real Media Stream traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rmstream-dwlnk-pkts	Description: The total number of packets of Real Media Stream traffic sent to MS. Triggers: Increments when a packet of Real Media Stream traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-rfactor-uplnk-bytes	Description: The total number of bytes of Rfactor traffic received from MS. Triggers: Increments when a packet of Rfactor traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rfactor-dwlnk-bytes	Description: The total number of bytes of Rfactor traffic sent to MS. Triggers: Increments when a packet of Rfactor traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rfactor-uplnk-pkts	Description: The total number of packets of Rfactor traffic received from MS. Triggers: Increments when a packet of Rfactor traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-rfactor-dwlnk-pkts	Description: The total number of packets of Rfactor traffic sent to MS. Triggers: Increments when a packet of Rfactor traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-splashfighter-uplnk-bytes	Description: The total number of bytes of Splashfighter traffic received from MS. Triggers: Increments when a packet of Splashfighter traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-splashfighter-dwlnk-bytes	Description: The total number of bytes of Splashfighter traffic sent to MS. Triggers: Increments when a packet of Splashfighter traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-splashfighter-uplnk-pkts	Description: The total number of packets of Splashfighter traffic received from MS. Triggers: Increments when a packet of Splashfighter traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-splashfighter-dwlnk-pkts	Description: The total number of packets of Splashfighter traffic sent to MS. Triggers: Increments when a packet of Splashfighter traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ssdp-uplnk-bytes	Description: The total number of bytes of SSDP traffic received from MS. Triggers: Increments when a packet of SSDP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ssdp-dwlnk-bytes	Description: The total number of bytes of SSDP traffic sent to MS. Triggers: Increments when a packet of SSDP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-ssdp-uplnk-pkts	Description: The total number of packets of SSDP traffic received from MS. Triggers: Increments when a packet of SSDP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-ssdp-dwlnk-pkts	Description: The total number of packets of SSDP traffic sent to MS. Triggers: Increments when a packet of SSDP traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-stealthnet-uplnk-bytes	Description: The total number of bytes of Stealthnet traffic received from MS. Triggers: Increments when a packet of Stealthnet traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-stealthnet-dwlnk-bytes	Description: The total number of bytes of Stealthnet traffic sent to MS. Triggers: Increments when a packet of Stealthnet traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-stealthnet-uplnk-pkts	Description: The total number of packets of Stealthnet traffic received from MS. Triggers: Increments when a packet of Stealthnet traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-stealthnet-dwlnk-pkts	Description: The total number of packets of Stealthnet traffic sent to MS. Triggers: Increments when a packet of Stealthnet traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-stun-uplnk-bytes	Description: The total number of bytes of STUN traffic received from MS. Triggers: Increments when a packet of STUN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-stun-dwlnk-bytes	Description: The total number of bytes of STUN traffic sent to MS. Triggers: Increments when a packet of STUN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-stun-uplnk-pkts	Description: The total number of packets of STUN traffic received from MS. Triggers: Increments when a packet of STUN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-stun-dwlnk-pkts	Description: The total number of packets of STUN traffic sent to MS. Triggers: Increments when a packet of STUN traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-teamspeak-uplnk-bytes	Description: The total number of bytes of TeamSpeak traffic received from MS. Triggers: Increments when a packet of TeamSpeak traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-teamspeak-dwlnk-bytes	Description: The total number of bytes of TeamSpeak traffic sent to MS. Triggers: Increments when a packet of TeamSpeak traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-teamspeak-uplnk-pkts	Description: The total number of packets of TeamSpeak traffic received from MS. Triggers: Increments when a packet of TeamSpeak traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-teamspeak-dwlnk-pkts	Description: The total number of packets of TeamSpeak traffic sent to MS. Triggers: Increments when a packet of TeamSpeak traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tor-uplnk-bytes	Description: The total number of bytes of Tor traffic received from MS. Triggers: Increments when a packet of Tor traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tor-dwlnk-bytes	Description: The total number of bytes of Tor traffic sent to MS. Triggers: Increments when a packet of Tor traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tor-uplnk-pkts	Description: The total number of packets of Tor traffic received from MS. Triggers: Increments when a packet of Tor traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-tor-dwlnk-pkts	Description: The total number of packets of Tor traffic sent to MS. Triggers: Increments when a packet of Tor traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-veohTV-uplnk-bytes	Description: The total number of bytes of VeohTV traffic received from MS. Triggers: Increments when a packet of VeohTV traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-veohTV-dwlnk-bytes	Description: The total number of bytes of VeohTV traffic sent to MS. Triggers: Increments when a packet of VeohTV traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-veohTV-uplnk-pkts	Description: The total number of packets of VeohTV traffic received from MS. Triggers: Increments when a packet of VeohTV traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-veohTV-dwlnk-pkts	Description: The total number of packets of VeohTV traffic sent to MS. Triggers: Increments when a packet of VeohTV traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wii-uplnk-bytes	Description: The total number of bytes of Wii traffic received from MS. Triggers: Increments when a packet of Wii traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-wii-dwlnk-bytes	Description: The total number of bytes of Wii traffic sent to MS. Triggers: Increments when a packet of Wii traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wii-uplnk-pkts	Description: The total number of packets of Wii traffic received from MS. Triggers: Increments when a packet of Wii traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wii-dwlnk-pkts	Description: The total number of packets of Wii traffic sent to MS. Triggers: Increments when a packet of Wii traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wmstream-uplnk-bytes	Description: The total number of bytes of Windows Media Stream traffic received from MS. Triggers: Increments when a packet of Windows Media Stream traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wmstream-dwlnk-bytes	Description: The total number of bytes of Windows Media Stream traffic sent to MS. Triggers: Increments when a packet of Windows Media Stream traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wmstream-uplnk-pkts	Description: The total number of packets of Windows Media Stream traffic received from MS. Triggers: Increments when a packet of Windows Media Stream traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wmstream-dwlnk-pkts	Description: The total number of packets of Windows Media Stream traffic sent to MS. Triggers: Increments when a packet of Windows Media Stream traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wofkungfu-uplnk-bytes	Description: The total number of bytes of WofKungfu traffic received from MS. Triggers: Increments when a packet of WofKungfu traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wofkungfu-dwlnk-bytes	Description: The total number of bytes of WofKungfu traffic sent to MS. Triggers: Increments when a packet of WofKungfu traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wofkungfu-uplnk-pkts	Description: The total number of packets of WofKungfu traffic received from MS. Triggers: Increments when a packet of WofKungfu traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-wofkungfu-dwlnk-pkts	Description: The total number of packets of WofKungfu traffic sent to MS. Triggers: Increments when a packet of WofKungfu traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-xdcc-uplnk-bytes	Description: The total number of bytes of XDCC traffic received from MS. Triggers: Increments when a packet of XDCC traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-xdcc-dwlnk-bytes	Description: The total number of bytes of XDCC traffic sent to MS. Triggers: Increments when a packet of XDCC traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-xdcc-uplnk-pkts	Description: The total number of packets of XDCC traffic received from MS. Triggers: Increments when a packet of XDCC traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-xdcc-dwlnk-pkts	Description: The total number of packets of XDCC traffic sent to MS. Triggers: Increments when a packet of XDCC traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yourfreetunnel-uplnk-bytes	Description: The total number of bytes of YourFreedomTunnel traffic received from MS. Triggers: Increments when a packet of YourFreedomTunnel traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yourfreetunnel-dwlnk-bytes	Description: The total number of bytes of YourFreedomTunnel traffic sent to MS. Triggers: Increments when a packet of YourFreedomTunnel traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yourfreetunnel-uplnk-pkts	Description: The total number of packets of YourFreedomTunnel traffic received from MS. Triggers: Increments when a packet of YourFreedomTunnel traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-yourfreetunnel-dwlnk-pkts	Description: The total number of packets of YourFreedomTunnel traffic sent to MS. Triggers: Increments when a packet of YourFreedomTunnel traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-facebook-uplnk-bytes	 Important: Counts only direct Facebook domain traffic (www.facebook.com), which is detected as P2P bytes and not as HTTP bytes. Triggers: Increments when a packet of Facebook traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-facebook-dwlnk-bytes	Description: The total number of bytes of Facebook domain traffic sent to MS.  Important: Counts only direct Facebook domain traffic (www.facebook.com), which is detected as P2P bytes and not as HTTP bytes. Triggers: Increments when a packet of Facebook traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-facebook-uplnk-pkts	Description: The total number of packets of Facebook domain traffic received from MS.  Important: Counts only direct Facebook domain traffic (www.facebook.com), which is detected as P2P bytes and not as HTTP bytes. Triggers: Increments when a packet of Facebook traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-facebook-dwlnk-pkts	Description: The total number of packets of Facebook domain traffic sent to MS.  Important: Counts only direct Facebook domain traffic (www.facebook.com), which is detected as P2P bytes and not as HTTP bytes. Triggers: Increments when a packet of Facebook traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gamekit-uplnk-bytes	Description: The total number of bytes of Gamekit traffic received from MS. Triggers: Increments when a packet of Gamekit traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gamekit-dwlnk-bytes	Description: The total number of bytes of Gamekit traffic sent to MS. Triggers: Increments when a packet of Gamekit traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gamekit-uplnk-pkts	Description: The total number of packets of Gamekit traffic received from MS. Triggers: Increments when a packet of Gamekit traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gamekit-dwlnk-pkts	Description: The total number of packets of Gamekit traffic sent to MS. Triggers: Increments when a packet of Gamekit traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-facetime-uplnk-bytes	Description: The total number of bytes of Facetime traffic received from MS. Triggers: Increments when a packet of Facetime traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-facetime-dwlnk-bytes	Description: The total number of bytes of Facetime traffic sent to MS. Triggers: Increments when a packet of Facetime traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-facetime-uplnk-pkts	Description: The total number of packets of Facetime traffic received from MS. Triggers: Increments when a packet of Facetime traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-facetime-dwlnk-pkts	Description: The total number of packets of Facetime traffic sent to MS. Triggers: Increments when a packet of Facetime traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gmail-uplnk-bytes	Description: The total number of bytes of Gmail traffic received from MS. Triggers: Increments when a packet of Gmail traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gmail-dwlnk-bytes	Description: The total number of bytes of Gmail traffic sent to MS. Triggers: Increments when a packet of Gmail traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gmail-uplnk-pkts	Description: The total number of packets of Gmail traffic received from MS. Triggers: Increments when a packet of Gmail traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-gmail-dwlnk-pkts	Description: The total number of packets of Gmail traffic sent to MS. Triggers: Increments when a packet of Gmail traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-itunes-uplnk-bytes	Description: The total number of bytes of iTunes traffic received from MS. Triggers: Increments when a packet of iTunes traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-itunes-dwlnk-bytes	Description: The total number of bytes of iTunes traffic sent to MS. Triggers: Increments when a packet of iTunes traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-itunes-uplnk-pkts	Description: The total number of packets of iTunes traffic received from MS. Triggers: Increments when a packet of iTunes traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-itunes-dwlnk-pkts	Description: The total number of packets of iTunes traffic sent to MS. Triggers: Increments when a packet of iTunes traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-myspace-uplnk-bytes	Description: The total number of bytes of MySpace traffic received from MS. Triggers: Increments when a packet of MySpace traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-myspace-dwlnk-bytes	Description: The total number of bytes of MySpace traffic sent to MS. Triggers: Increments when a packet of MySpace traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-myspace-uplnk-pkts	Description: The total number of packets of MySpace traffic received from MS. Triggers: Increments when a packet of MySpace traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-myspace-dwlnk-pkts	Description: The total number of packets of MySpace traffic sent to MS. Triggers: Increments when a packet of MySpace traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-teamviewer-uplnk-bytes	Description: The total number of bytes of TeamViewer traffic received from MS. Triggers: Increments when a packet of TeamViewer traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-teamviewer-dwlnk-bytes	Description: The total number of bytes of TeamViewer traffic sent to MS. Triggers: Increments when a packet of TeamViewer traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-teamviewer-uplnk-pkts	Description: The total number of packets of TeamViewer traffic received from MS. Triggers: Increments when a packet of TeamViewer traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-teamviewer-dwlnk-pkts	Description: The total number of packets of TeamViewer traffic sent to MS. Triggers: Increments when a packet of TeamViewer traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-twitter-uplnk-bytes	Description: The total number of bytes of Twitter traffic received from MS. Triggers: Increments when a packet of Twitter traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-twitter-dwlnk-bytes	Description: The total number of bytes of Twitter traffic sent to MS. Triggers: Increments when a packet of Twitter traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-twitter-uplnk-pkts	Description: The total number of packets of Twitter traffic received from MS. Triggers: Increments when a packet of Twitter traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-twitter-dwlnk-pkts	Description: The total number of packets of Twitter traffic sent to MS. Triggers: Increments when a packet of Twitter traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-viber-uplnk-bytes	Description: The total number of bytes of Viber traffic received from MS. Triggers: Increments when a packet of Viber traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-viber-dwlnk-bytes	Description: The total number of bytes of Viber traffic sent to MS. Triggers: Increments when a packet of Viber traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-viber-uplnk-pkts	Description: The total number of packets of Viber traffic received from MS. Triggers: Increments when a packet of Viber traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-viber-dwlnk-pkts	Description: The total number of packets of Viber traffic sent to MS. Triggers: Increments when a packet of Viber traffic is detected by the P2P analyzer. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-scydo-uplnk-bytes	Description: The total number of bytes of Scydo traffic received from MS. Triggers: Increments when a packet of Scydo traffic is detected by the P2P analyzer in the uplink direction. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-scydo-dwlnk-bytes	Description: The total number of bytes of Scydo traffic sent to MS. Triggers: Increments when a packet of Scydo traffic is detected by the P2P analyzer in the downlink direction. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-scydo-uplnk-pkts	Description: The total number of packets of Scydo traffic received from MS. Triggers: Increments when a packet of Scydo traffic is detected by the P2P analyzer in the uplink direction. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-scydo-dwlnk-pkts	Description: The total number of packets of Scydo traffic sent to MS. Triggers: Increments when a packet of Scydo traffic is detected by the P2P analyzer in the downlink direction. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-whatsapp-uplnk-bytes	Description: The total number of bytes of WhatsApp traffic received from MS. Triggers: Increments when a packet of WhatsApp traffic is detected by the P2P analyzer in the uplink direction. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-whatsapp-dwlnk-bytes	Description: The total number of bytes of WhatsApp traffic sent to MS. Triggers: Increments when a packet of WhatsApp traffic is detected by the P2P analyzer in the downlink direction. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
p2p-whatsapp-uplnk-pkts	Description: The total number of packets of WhatsApp traffic received from MS. Triggers: Increments when a packet of WhatsApp traffic is detected by the P2P analyzer in the uplink direction. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
p2p-whatsapp-dwnlk-pkts	Description: The total number of packets of WhatsApp traffic sent to MS. Triggers: Increments when a packet of WhatsApp traffic is detected by the P2P analyzer in the downlink direction. The payload length is added to the counter. Availability: Per Active Charging Service.	Int64
DNS Statistics		
dns-flows	Description: The combined total of the number of DNS flows previously analyzed + DNS flows currently being analyzed. Triggers: Increments whenever a new DNS flow is created. Availability: Per Active Charging Service.	Int32
dns-flows-cur	Description: The number of DNS flows currently being analyzed. Triggers: Increments whenever a new DNS flow is created. Decrements whenever a DNS flow ends. Availability: Per Active Charging Service. Type: Gauge	Int32
dns-uplk-bytes	Description: The total number of DNS bytes received from MS. Triggers: Increments whenever a new DNS packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
dns-dwnlk-bytes	Description: The total number of DNS bytes sent to MS. Triggers: Increments whenever a new DNS packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
dns-uplk-pkts	Description: The total number of DNS packets received from MS. Triggers: Increments whenever a new DNS packet is detected in uplink direction. Availability: Per Active Charging Service.	Int64
dns-dwnlk-pkts	Description: The total number of DNS packets sent to MS. Triggers: Increments whenever a new DNS packet is detected in downlink direction. Availability: Per Active Charging Service.	Int64
dns-unk-opcode	Description: The total number of DNS packets with an unknown operational code. Triggers: Increments whenever a DNS packet with unknown operation code is received. Availability: Per Active Charging Service.	Int32
dns-inv-pkts	Description: The total number of invalid DNS packets detected. Triggers: Increments whenever an invalid DNS packet is detected. Availability: Per Active Charging Service.	Int32
dns-over-tcp-uplk-bytes	Description: The total number of DNS uplink bytes that were detected over TCP. Triggers: Increments whenever a new DNS uplink packet arrives over TCP. Availability: Per Active Charging Service.	Int64
dns-over-tcp-dwnlk-bytes	Description: The total number of DNS downlink bytes that were detected over TCP. Triggers: Increments whenever a new DNS downlink packet arrives over TCP. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
dns-over-tcp-uplk-pkts	Description: The total number of DNS uplink packets that were detected over TCP. Triggers: Increments whenever a new DNS uplink packet arrives over TCP. Availability: Per Active Charging Service.	Int64
dns-over-tcp-dwnlk-pkts	Description: The total number of DNS downlink packets that were detected over TCP. Triggers: Increments whenever a new DNS downlink packet arrives over TCP. Availability: Per Active Charging Service.	Int64
dns-req-a-query	Description: The total number of DNS requests received for queries. Triggers: Increments whenever a DNS packet is received for queries. Availability: Per Active Charging Service.	Int64
dns-req-cname-query	Description: The total number of DNS requests received for cname queries. Triggers: Increments whenever a DNS packet is received for cname queries. Availability: Per Active Charging Service.	Int64
dns-req-ns-query	Description: The total number of DNS requests received for ns queries. Triggers: Increments whenever a DNS packet is received for ns queries. Availability: Per Active Charging Service.	Int64
dns-req-ptr-query	Description: The total number of DNS requests received for ptr queries. Triggers: Increments whenever a DNS packet is received for ptr queries. Availability: Per Active Charging Service.	Int64
dns-req-aaaa-query	Description: The total number of DNS requests received for AAAA queries. Triggers: Increments whenever a DNS packet is received for AAAA queries. Availability: Per Active Charging Service.	Int64
dns-req-unknown-query	Description: The total number of DNS requests received for unknown queries. Triggers: Increments whenever a DNS packet is received for unknown queries. Availability: Per Active Charging Service.	Int64
dns-rsp-a-query	Description: The total number of DNS responses received for queries. Triggers: Increments whenever a DNS response packet is received for queries. Availability: Per Active Charging Service.	Int64
dns-rsp-cname-query	Description: The total number of DNS responses received for cname queries. Triggers: Increments whenever a DNS response packet is received for cname queries. Availability: Per Active Charging Service.	Int64
dns-rsp-ns-query	Description: The total number of DNS responses received for ns queries. Triggers: Increments whenever a DNS response packet is received for ns queries. Availability: Per Active Charging Service.	Int64
dns-rsp-ptr-query	Description: The total number of DNS responses received for ptr queries. Triggers: Increments whenever a DNS response packet is received for ptr queries. Availability: Per Active Charging Service.	Int64
dns-rsp-aaaa-query	Description: The total number of DNS responses received for AAAA queries. Triggers: Increments whenever a DNS response packet is received for AAAA queries. Availability: Per Active Charging Service.	Int64
dns-rsp-unknown-query	Description: The total number of DNS responses received for unknown queries. Triggers: Increments whenever a DNS response packet is received for unknown queries. Availability: Per Active Charging Service.	Int64

Variables	Description	Data Type
ECS DNS Snooping Feature Related		
Historical ECS Statistics		
ecs-ttlsuccess	Description: The total number of successful ECS sessions. Triggers: Increments whenever an ECS session is successfully created. Availability: Per Active Charging Service.	Int32
ecs-ttlfail	Description: The total number of failed ECS sessions. Triggers: Increments whenever an ECS session creation fails. Availability: Per Active Charging Service.	Int32
ecs-curactive	Description: The number of currently active ECS sessions. Triggers: Increments whenever a new ECS session is created. Decrements whenever an ECS session ends. Availability: Per Active Charging Service. Type: Gauge	Int32
ecs-15peak-curactive	Description: The peak number of active ECS sessions in 15 one-minute intervals over the last 15 minutes. ecs-15peak-curactive is computed from ecs-curactive gathered every minute over the last 15 minutes. Triggers: This is updated every 15 minutes. Availability: Per Active Charging Service. Type: Gauge	Int32
ecs-ruleshit	Description: The total number of rules hit. Triggers: Increments whenever a rule is hit. Availability: Per Active Charging Service.	v12.3 and earlier: Int32
ecs-ppruleshit	Description: The total number of post-processing rules hit. Triggers: Increments whenever a post-processing rule is hit. Availability: Per Active Charging Service.	v12.3 and earlier: Int32
ecs-ttldlinkbytes	Description: The total number of downlink bytes detected for ECS sessions. Triggers: Increments whenever a downlink packet is received for the ECS session. Availability: Per Active Charging Service.	Int64
ecs-ttlulinkbytes	Description: The total number of uplink bytes detected for ECS sessions. Triggers: Increments whenever an uplink packet is received for the ECS session. Availability: Per Active Charging Service.	Int64
ecs-ttldlinkpackets	Description: The total number of downlink packets detected for ECS sessions. Triggers: Increments whenever a downlink packet is received for the ECS session. Availability: Per Active Charging Service.	Int64
ecs-ttlulinkpackets	Description: The total number of uplink packets detected for ECS sessions. Triggers: Increments whenever an uplink packet is received for the ECS session. Availability: Per Active Charging Service.	Int64
ecs-ttlflowconn	Description: The total number of flows established by ECS sessions. Triggers: Increments whenever a new flow is created for the ECS session. Availability: Per Active Charging Service.	v12.3 and earlier: Int32

Variables	Description	Data Type
ecs-ttlflowdisc	Description: The total number of flows disconnected for ECS sessions. Triggers: Increments whenever a flow is disconnected for the ECS session. Availability: Per Active Charging Service.	v12.3 and earlier: Int32
ecs-curflow	Description: The number of currently active ECS flows. Triggers: Increments whenever a new ECS flow is created. Decrements whenever an ECS flow is removed. Availability: Per Active Charging Service. Type: Gauge	Int32
ecs-15peak-curflow	Description: The peak number of active ECS flows in 15 one-minute intervals over the last 15 minutes. ecs-15peak-curflow is computed from ecs-curflow gathered every minute over the last 15 minutes. Triggers: This is updated every 15 minutes. Availability: Per Active Charging Service. Type: Gauge	Int32
ecs-15min-usage-flowall	Description: The total number of active ECS flows detected in the last 15 minutes. Triggers: Increments whenever a new ECS flow is created in last 15 minutes. Decrements whenever an ECS flow is removed in last 15 minutes. Availability: Per Active Charging Service. Type: Gauge	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 21

eGTP-C Service Schema

The eGTP-C schema provides operational statistics that can be used for monitoring and troubleshooting the following products: MME, P-GW, S-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 21. Bulk Statistic Variables in the eGTP-C Service Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the eGTP service. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the eGTP service. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	Displays the name of the eGTP service for which the statistics are displayed. This is a key variable. Type: Information	String
servid	The identification number of the service configured on the system that is currently facilitating the eGTP service. This is an internal reference number. This is a key variable. Type: Information	Int32
tun-sent-cresess	The total number of initial tunnel - create session request messages sent by the system. Type: Counter	Int32
tun-sent-retranscresess	The total number of tunnel - retransmitted create session request messages sent by the system. Type: Counter	Int32
tun-recv-cresess	The total number of tunnel - create session request messages received by the system. Type: Counter	Int32
tun-recv-retranscresess	The total number of tunnel - retransmitted create session request messages received by the system. Type: Counter	Int32
tun-sent-cresessresp	The total number of tunnel - create session response messages sent by the system. Type: Counter	Int32
tun-sent-cresessrespaccept	The total number of tunnel - create session response - accepted messages sent by the system. Type: Counter	Int32
tun-sent-cresessrespdenied	The total number of tunnel - create session response - denied messages sent by the system. Type: Counter	Int32
tun-sent-retranscresessresp	The total number of tunnel - retransmitted create session response - messages sent by the system. Type: Counter	Int32
tun-recv-cresessresp	The total number of tunnel - create session response messages received by the system. Type: Counter	Int32
tun-recv-cresessrespaccept	The total number of tunnel - create session response - accepted messages received by the system. Type: Counter	Int32
tun-recv-cresessrespdenied	The total number of tunnel - create session response - denied messages received by the system. Type: Counter	Int32

Variables	Description	Data Type
tun-sent-crebear	The total number of tunnel - create bearer request messages sent by the system. Type: Counter	Int32
tun-sent-retranscrebear	The total number of tunnel - retransmitted create bearer request messages sent by the system. Type: Counter	Int32
tun-recv-crebear	The total number of tunnel - create bearer request messages received by the system. Type: Counter	Int32
tun-recv-retranscrebear	The total number of tunnel - retransmitted create bearer request messages received by the system. Type: Counter	Int32
tun-sent-crebearresp	The total number of tunnel - create bearer response messages sent by the system. Type: Counter	Int32
tun-sent-crebearrespaccept	The total number of tunnel - create bearer response - accepted messages sent by the system. Type: Counter	Int32
tun-sent-crebearrespdenied	The total number of tunnel - create bearer response - denied messages sent by the system. Type: Counter	Int32
tun-sent-retranscrebearresp	The total number of tunnel - retransmitted create bearer response - messages sent by the system. Type: Counter	Int32
tun-recv-crebearresp	The total number of tunnel - create bearer response messages received by the system. Type: Counter	Int32
tun-recv-crebearrespaccept	The total number of tunnel - create bearer response - accepted messages received by the system. Type: Counter	Int32
tun-recv-crebearrespdenied	The total number of tunnel - create bearer response - denied messages received by the system. Type: Counter	Int32
tun-sent-bearrescmd	The total number of tunnel - bearer resource command messages sent by the system. Type: Counter	Int32
tun-sent-retransbearrescmd	The total number of tunnel - retransmitted bearer resource command messages sent by the system. Type: Counter	Int32
tun-recv-bearrescmd	The total number of tunnel - bearer resource command messages received by the system. Type: Counter	Int32
tun-recv-retransbearrescmd	The total number of tunnel - retransmitted bearer resource command messages received by the system. Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
tun-sent-bearrescmd-fail	The total number of tunnel - bearer resource command - failure messages sent by the system. Type: Counter	Int32
tun-sent-retransbearrescmd-fail	The total number of tunnel - retransmitted bearer resource command - failure messages sent by the system. Type: Counter	Int32
tun-recv-bearrescmd-fail	The total number of tunnel - bearer resource command - failure messages received by the system. Type: Counter	Int32
tun-recv-retransbearrescmd-fail	The total number of tunnel - retransmitted bearer resource command - failure messages received by the system. Type: Counter	Int32
tun-sent-modbearreq	The total number of tunnel - modify bearer request messages sent by the system. Type: Counter	Int32
tun-sent-retransmodbearreq	The total number of tunnel - retransmitted modify bearer request messages sent by the system. Type: Counter	Int32
tun-recv-modbearreq	The total number of tunnel - modify bearer request messages received by the system. Type: Counter	Int32
tun-recv-retransmodbearreq	The total number of tunnel - retransmitted modify bearer request messages received by the system. Type: Counter	Int32
tun-sent-modbearresp	The total number of tunnel - modify bearer response - messages sent by the system. Type: Counter	Int32
tun-sent-modbearrespaccept	The total number of tunnel - modify bearer response - accepted messages sent by the system. Type: Counter	Int32
tun-sent-modbearrespdenied	The total number of tunnel - modify bearer response - denied messages sent by the system. Type: Counter	Int32
tun-sent-retransmodbearresp	The total number of tunnel - retransmitted modify bearer response - messages sent by the system. Type: Counter	Int32
tun-recv-modbearresp	The total number of tunnel - modify bearer response messages received by the system. Type: Counter	Int32
tun-recv-modbearrespaccept	The total number of tunnel - modify bearer response - accepted messages received by the system. Type: Counter	Int32
tun-recv-modbearrespdenied	The total number of tunnel - modify bearer response - denied messages received by the system. Type: Counter	Int32

Variables	Description	Data Type
tun-sent-delsessreq	The total number of tunnel - delete session request messages sent by the system. Type: Counter	Int32
tun-sent-retransdelsessreq	The total number of tunnel - retransmitted delete session request messages sent by the system. Type: Counter	Int32
tun-recv-delsessreq	The total number of tunnel - delete session request messages received by the system. Type: Counter	Int32
tun-recv-retransdelsessreq	The total number of tunnel - retransmitted delete session request messages received by the system. Type: Counter	Int32
tun-sent-delsessresp	The total number of tunnel - delete session response messages sent by the system. Type: Counter	Int32
tun-sent-delsessrespaccept	The total number of tunnel - delete session response - accepted messages sent by the system. Type: Counter	Int32
tun-sent-delsessrespdenied	The total number of tunnel - delete session response - denied messages sent by the system. Type: Counter	Int32
tun-recv-delsessresp	The total number of tunnel - delete session response messages received by the system. Type: Counter	Int32
tun-recv-delsessrespaccept	The total number of tunnel - delete session response - accepted messages received by the system. Type: Counter	Int32
tun-recv-delsessrespdenied	The total number of tunnel - delete session response - denied messages received by the system. Type: Counter	Int32
tun-sent-delbearreq	The total number of tunnel - delete bearer request messages sent by the system. Type: Counter	Int32
tun-sent-retransdelbearreq	The total number of tunnel - retransmitted delete bearer request messages sent by the system. Type: Counter	Int32
tun-recv-delbearreq	The total number of tunnel - delete bearer request messages received by the system. Type: Counter	Int32
tun-recv-retransdelbearreq	The total number of tunnel - retransmitted delete bearer request messages received by the system. Type: Counter	Int32
tun-sent-delbearresp	The total number of tunnel - delete bearer response messages sent by the system. Type: Counter	Int32
tun-sent-delbearrespaccept	The total number of tunnel - delete bearer response - accepted messages sent by the system. Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
tun-sent-delbearrespdenied	The total number of tunnel - delete bearer response - denied messages sent by the system. Type: Counter	Int32
tun-recv-delbearresp	The total number of tunnel - delete bearer response messages received by the system. Type: Counter	Int32
tun-recv-delbearrespaccept	The total number of tunnel - delete bearer response - accepted messages received by the system. Type: Counter	Int32
tun-recv-delbearrespdenied	The total number of tunnel - delete bearer response - denied messages received by the system. Type: Counter	Int32
tun-sent-dlinknotif	The total number of tunnel - downlink data notification request messages sent by the system. Type: Counter	Int32
tun-sent-retransdlinknotif	The total number of tunnel - retransmitted downlink data notification request messages sent by the system. Type: Counter	Int32
tun-recv-dlinknotif	The total number of tunnel - downlink data notification request messages received by the system. Type: Counter	Int32
tun-recv-retransdlinknotif	The total number of tunnel - retransmitted downlink data notification request messages received by the system. Type: Counter	Int32
tun-recv-dlinknotifack	The total number of tunnel - downlink data notification acknowledgement messages received by the system. Type: Counter	Int32
tun-recv-dlinknotifackaccept	The total number of tunnel - downlink data notification acknowledgement accepted messages received by the system. Type: Counter	Int32
tun-recv-dlinknotifackdenied	The total number of tunnel - downlink data notification acknowledgement denied messages received by the system. Type: Counter	Int32
tun-sent-dlinkdatafail	The total number of tunnel - downlink data failure messages sent by the system. Type: Counter	Int32
tun-recv-dlinkdatafail	The total number of tunnel - downlink data failure messages received by the system. Type: Counter	Int32
tun-sent-relaccbearreq	The total number of tunnel - release access bearers request messages sent by the system. Type: Counter	Int32
tun-sent-retransrelaccbearreq	The total number of tunnel - retransmitted release access bearers request messages sent by the system. Type: Counter	Int32

Variables	Description	Data Type
tun-recv-relaccbearreq	The total number of tunnel - release access bearers request messages received by the system. Type: Counter	Int32
tun-recv-retransrelaccbearreq	The total number of tunnel - retransmitted release access bearers request messages received by the system. Type: Counter	Int32
tun-sent-relaccbearresp	The total number of tunnel - release access bearers response messages sent by the system. Type: Counter	Int32
tun-sent-relaccbearrespaccept	The total number of tunnel - release access bearers response accepted messages sent by the system. Type: Counter	Int32
tun-sent-relaccbearrespdenied	The total number of tunnel - release access bearers response denied messages sent by the system. Type: Counter	Int32
tun-sent-retransrelaccbearresp	The total number of tunnel - retransmitted release access bearers response messages sent by the system. Type: Counter	Int32
tun-recv-relaccbearresp	The total number of tunnel - release access bearers response messages received by the system. Type: Counter	Int32
tun-recv-relaccbearrespaccept	The total number of tunnel - release access bearers response accepted messages received by the system. Type: Counter	Int32
tun-recv-relaccbearrespdenied	The total number of tunnel - release access bearers response denied messages received by the system. Type: Counter	Int32
tun-sent-modbearcmd	The total number of tunnel - modify bearer command messages sent by the system. Type: Counter	Int32
tun-sent-retransmodbearcmd	The total number of tunnel - retransmitted modify bearer command messages sent by the system. Type: Counter	Int32
tun-recv-modbearcmd	The total number of tunnel - modify bearer command messages received by the system. Type: Counter	Int32
tun-recv-retransmodbearcmd	The total number of tunnel - retransmitted modify bearer command messages received by the system. Type: Counter	Int32
tun-sent-modbearfail	The total number of tunnel - modify bearer command - failure indication messages sent by the system. Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
tun-sent-retransmodbearfail	The total number of tunnel - retransmitted modify bearer command - failure indication messages sent by the system. Type: Counter	Int32
tun-recv-modbearfail	The total number of tunnel - modify bearer command - failure indication messages received by the system. Type: Counter	Int32
tun-recv-retransmodbearfail	The total number of tunnel - retransmitted modify bearer command - failure indication messages received by the system. Type: Counter	Int32
tun-sent-delbearcmd	The total number of tunnel - delete bearer command messages sent by the system. Type: Counter	Int32
tun-sent-retransdelbearcmd	The total number of tunnel - retransmitted delete bearer command messages sent by the system. Type: Counter	Int32
tun-recv-delbearcmd	The total number of tunnel - delete bearer command messages received by the system. Type: Counter	Int32
tun-recv-retransdelbearcmd	The total number of tunnel - retransmitted delete bearer command messages received by the system. Type: Counter	Int32
tun-sent-delbearfail	The total number of tunnel - delete bearer command - failure indication messages sent by the system. Type: Counter	Int32
tun-sent-retransdelbearfail	The total number of tunnel - retransmitted delete bearer command - failure indication messages sent by the system. Type: Counter	Int32
tun-recv-delbearfail	The total number of tunnel - delete bearer command - failure indication messages received by the system. Type: Counter	Int32
tun-recv-retransdelbearfail	The total number of tunnel - retransmitted delete bearer command - failure indication messages received by the system. Type: Counter	Int32
tun-sent-updbearreq	The total number of tunnel - update bearer request messages sent by the system. Type: Counter	Int32
tun-sent-retransupdbearreq	The total number of tunnel - retransmitted update bearer request messages sent by the system. Type: Counter	Int32
tun-recv-updbearreq	The total number of tunnel - update bearer request messages received by the system. Type: Counter	Int32
tun-recv-retransupdbearreq	The total number of tunnel - retransmitted update bearer request messages received by the system. Type: Counter	Int32

Variables	Description	Data Type
tun-sent-updbearresp	The total number of tunnel - update bearer response messages sent by the system. Type: Counter	Int32
tun-sent-updbearrespaccept	The total number of tunnel - update bearer response - accepted messages sent by the system. Type: Counter	Int32
tun-sent-updbearrespdenied	The total number of tunnel - update bearer response - denied messages sent by the system. Type: Counter	Int32
tun-recv-updbearresp	The total number of tunnel - update bearer response messages received by the system. Type: Counter	Int32
tun-recv-updbearrespaccept	The total number of tunnel - update bearer response - accepted messages received by the system. Type: Counter	Int32
tun-recv-updbearrespdenied	The total number of tunnel - update bearer response - denied messages received by the system. Type: Counter	Int32
tun-sent-creinddatafwdngreq	The total number of tunnel - create indicators for data forwarding requests sent by the system. Type: Counter	Int32
tun-sent-retranscreinddatafwdngreq	The total number of tunnel - retransmit indicators for data forwarding requests, sent by the system. Type: Counter	Int32
tun-recv-creinddatafwdngreq	The total number of tunnel - create indicators for data forwarding requests, received by the system. Type: Counter	Int32
tun-recv-retranscreinddatafwdngreq	The total number of tunnel - retransmit indicators for data forwarding requests, received by the system. Type: Counter	Int32
tun-sent-creinddatafwdngrsp	The total number of tunnel - create indicators for data forwarding responses, sent by the system. Type: Counter	Int32
tun-sent-creinddatafwdngrspaccept	The total number of tunnel - create indicators for data forwarding responses accepted, sent by the system. Type: Counter	Int32
tun-sent-creinddatafwdngrspdenied	The total number of tunnel - create indicators for data forwarding responses denied, sent by the system. Type: Counter	Int32
tun-sent-retranscreinddatafwdngrsp	The total number of tunnel - retransmitted create indicators for data forwarding responses, sent by the system. Type: Counter	Int32

Variables	Description	Data Type
tun-recv-creinddatafwdngrsp	The total number of tunnel - create indicators for data forwarding responses, received by the system. Type: Counter	Int32
	Type: Counter	
tun-recv-creinddatafwdngrspdenied	The total number of tunnel - denied create indicators for data forwarding responses, received by the system. Type: Counter	Int32
tun-sent-delinddatafwdngreq	The total number of tunnel - deleted indicators for data forwarding requests, sent by the system. Type: Counter	Int32
tun-sent-retransdelinddatafwdngreq	The total number of tunnel - retransmitted delete indicators for data forwarding requests, sent by the system. Type: Counter	Int32
tun-recv-delinddatafwdngreq	The total number of tunnel - delete indicators for data forwarding requests, received by the system. Type: Counter	Int32
tun-recv-retransdelinddatafwdngreq	The total number of tunnel - retransmitted delete indicators for data forwarding requests, received by the system. Type: Counter	Int32
tun-sent-delinddatafwdngrsp	The total number of tunnel - delete indicators for data forwarding responses, sent by the system. Type: Counter	Int32
tun-sent-delinddatafwdngrspaccept	The total number of tunnel - delete indicators for data forwarding responses accepted, sent by the system. Type: Counter	Int32
tun-sent-delinddatafwdngrspdenied	The total number of tunnel - delete indicators for data forwarding responses denied, sent by the system. Type: Counter	Int32
tun-recv-delinddatafwdngrsp	The total number of tunnel - delete indicators for data forwarding responses, received by the system. Type: Counter	Int32
tun-recv-delinddatafwdngrspaccept	The total number of tunnel - delete indicators for data forwarding responses accepted, received by the system. Type: Counter	Int32
tun-recv-delinddatafwdngrspdenied	The total number of tunnel - delete indicators for data forwarding responses denied, received by the system. Type: Counter	Int32
csfb-sent-suspendnotf	Circuit-Switched Fallback - The total number of suspend notification messages sent by this service. Type: Counter	Int32

Variables	Description	Data Type
csfb-sent-retranssuspendnotf	Circuit-Switched Fallback - The total number of retransmitted suspend notification messages sent by this service. Type: Counter	Int32
csfb-recv-suspendnotf	Circuit-Switched Fallback - The total number of suspend notification messages received by this service. Type: Counter	Int32
csfb-recv-retranssuspendnotf	Circuit-Switched Fallback - The total number of retransmitted suspend notification messages received by this service. Type: Counter	Int32
csfb-sent-suspendack	Circuit-Switched Fallback - The total number of suspend acknowledgement messages sent by this service. Type: Counter	Int32
csfb-sent-suspendackaccept	Circuit-Switched Fallback - The total number of suspend acknowledgement accepted messages sent by this service. Type: Counter	Int32
csfb-sent-suspendackdenied	Circuit-Switched Fallback - The total number of suspend acknowledgement denied messages sent by this service. Type: Counter	Int32
csfb-recv-suspendack	Circuit-Switched Fallback - The total number of suspend acknowledgement messages received by this service. Type: Counter	Int32
csfb-recv-suspendackaccept	Circuit-Switched Fallback - The total number of suspend acknowledgement accepted messages received by this service. Type: Counter	Int32
csfb-recv-suspenddenied	Circuit-Switched Fallback - The total number of suspend acknowledgement denied messages received by this service. Type: Counter	Int32
csfb-sent-resumenotf	Circuit-Switched Fallback - The total number of resume notification messages sent by this service. Type: Counter	Int32
csfb-sent-retransresumenotf	Circuit-Switched Fallback - The total number of retransmitted resume notification messages sent by this service. Type: Counter	Int32
csfb-recv-resumenotf	Circuit-Switched Fallback - The total number of resume notification messages received by this service. Type: Counter	Int32
csfb-recv-retransresumenotf	Circuit-Switched Fallback - The total number of retransmitted resume notification messages received by this service. Type: Counter	Int32
csfb-sent-resumeack	Circuit-Switched Fallback - The total number of resume acknowledgement message sent by this service. Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
csfb-sent-resumeackaccept	Circuit-Switched Fallback - The total number of resume acknowledgement accepted messages sent by this service. Type: Counter	Int32
csfb-sent-resumeackdenied	Circuit-Switched Fallback - The total number of resume acknowledgement denied messages sent by this service. Type: Counter	Int32
csfb-recv-resumeack	Circuit-Switched Fallback - The total number of resume acknowledgement message received by this service. Type: Counter	Int32
csfb-recv-resumeackaccept	Circuit-Switched Fallback - The total number of resume acknowledgement accepted messages received by this service. Type: Counter	Int32
csfb-recv-resumedenied	Circuit-Switched Fallback - The total number of resume acknowledgement denied messages received by this service. Type: Counter	Int32
OutSigPktS5S8PGW	The total number of outgoing signalling packets over the S5/S8 P-GW interface. Type: Counter	Int32
IncSigPktS5S8PGW	The total number of incoming signalling packets over the S5/S8 P-GW interface. Type: Counter	Int32
OutSigOctS5S8PGW	The total number of outgoing signalling octets over the S5/S8 P-GW interface. Type: Counter	Int32
IncSigOctS5S8PGW	The total number of incoming signalling octets over the S5/S8 P-GW interface. Type: Counter	Int32
OutSigPktS5S8SGW	The total number of outgoing signalling packets over the S5/S8 S-GW interface. Type: Counter	Int32
IncSigPktS5S8SGW	The total number of incoming signalling packets over the S5/S8 S-GW interface. Type: Counter	Int32
OutSigOctS5S8SGW	The total number of outgoing signalling octets over the S5/S8 S-GW interface. Type: Counter	Int32
IncSigOctS5S8SGW	The total number of incoming signalling octets over the S5/S8 S-GW interface. Type: Counter	Int32
OutSigPktS11S4SGW	The total number of outgoing signalling packets over the S11 and/or S4 S-GW interface. Type: Counter	Int32
IncSigPktS11S4SGW	The total number of incoming signalling packets over the S11 and/or S4 S-GW interface. Type: Counter	Int32
OutSigOctS11S4SGW	The total number of outgoing signalling octets over the S11 and/or S4 S-GW interface. Type: Counter	Int32

Variables	Description	Data Type
IncSigOctS11S4SGW	The total number of incoming signalling octets over the S11 and/or S4 S-GW interface. Type: Counter	Int32
OutSigPktS11S10MME	The total number of outgoing signalling packets over the S11 and/or S10 MME interface. Type: Counter	Int32
IncSigPktS11S10MME	The total number of incoming signalling packets over the S11 and/or S10 MME interface. Type: Counter	Int32
OutSigOctS11S10MME	The total number of outgoing signalling octets over the S11 and/or S10 MME interface. Type: Counter	Int32
IncSigOctS11S10MME	The total number of incoming signalling octets over the S11 and/or S10 MME interface. Type: Counter	Int32
OutSigPktS4SGSN	The total number of outgoing signalling packets over the S4 SGSN interface. Type: Counter	Int32
IncSigPktS4SGSN	The total number of incoming signalling packets over the S4 SGSN interface. Type: Counter	Int32
OutSigOctS4SGSN	The total number of outgoing signalling octets over the S4 SGSN interface. Type: Counter	Int32
IncSigOctS4SGSN	The total number of incoming signalling octets over the S4 SGSN interface. Type: Counter	Int32
path-sent-echoreq	The total number of path - echo request messages sent by the system. Type: Counter	Int32
path-sent-retransechoreq	The total number of path - retransmitted echo request messages sent by the system. Type: Counter	Int32
path-recv-echoreq	The total number of path - echo request messages received by the system. Type: Counter	Int32
path-sent-echoresp	The total number of path - echo response messages sent by the system. Type: Counter	Int32
path-recv-echoresp	The total number of path - echo response messages received by the system. Type: Counter	Int32
path-sent-versnotsupp	The total number of path - version not supported indication messages sent by the system. Type: Counter	Int32
path-recv-versnotsupp	The total number of path - version not supported indication messages received by the system. Type: Counter	Int32
mobility-sent-ctxreq	The total number of mobility - context request messages sent by the system. Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
mobility-sent-retransctxreq	The total number of mobility - retransmitted context request messages sent by the system. Type: Counter	Int32
mobility-recv-ctxreq	The total number of mobility - context request messages received by the system. Type: Counter	Int32
mobility-recv-retransctxreq	The total number of mobility - retransmitted context request messages received by the system. Type: Counter	Int32
mobility-sent-ctxrsp	The total number of mobility - context response messages sent by the system. Type: Counter	Int32
mobility-sent-retransctxrsp	The total number of mobility - retransmitted context response messages sent by the system. Type: Counter	Int32
mobility-recv-ctxrsp	The total number of mobility - context response messages received by the system. Type: Counter	Int32
mobility-recv-retransctxrsp	The total number of mobility - retransmitted context response messages received by the system. Type: Counter	Int32
mobility-sent-ctxrspaccept	The total number of mobility - context response - accepted messages sent by the system. Type: Counter	Int32
mobility-sent-ctxrspdenied	The total number of mobility - context response - denied messages sent by the system. Type: Counter	Int32
mobility-recv-ctxrspaccept	The total number of mobility - context response - accepted messages received by the system. Type: Counter	Int32
mobility-recv-ctxrspdenied	The total number of mobility - context response - denied messages received by the system. Type: Counter	Int32
mobility-sent-ctxack	The total number of mobility - context acknowledge messages sent by the system. Type: Counter	Int32
mobility-sent-retransctxack	The total number of mobility - retransmitted context acknowledge messages sent by the system. Type: Counter	Int32
mobility-recv-ctxack	The total number of mobility - context acknowledge messages received by the system. Type: Counter	Int32
mobility-recv-retransctxack	The total number of mobility - retransmitted context acknowledge messages received by the system. Type: Counter	Int32

Variables	Description	Data Type
mobility-sent-ctxackaccept	The total number of mobility - contextacknowledge - accepted messages sent by the system. Type: Counter	Int32
mobility-sent-ctxackdenied	The total number of mobility - contextacknowledge - denied messages sent by the system. Type: Counter	Int32
mobility-recv-ctxackaccept	The total number of mobility - contextacknowledge - accepted messages received by the system. Type: Counter	Int32
mobility-recv-ctxackdenied	The total number of mobility - contextacknowledge - denied messages received by the system. Type: Counter	Int32
mobility-sent-idtreq	The total number of mobility - identity request messages sent by the system. Type: Counter	Int32
mobility-sent-retransidtreq	The total number of mobility - retransmitted identity request messages sent by the system. Type: Counter	Int32
mobility-recv-idtreq	The total number of mobility - identity request messages received by the system. Type: Counter	Int32
mobility-recv-retransidtreq	The total number of mobility - retransmitted identity request messages received by the system. Type: Counter	Int32
mobility-sent-idtrsp	The total number of mobility - identity response messages sent by the system. Type: Counter	Int32
mobility-sent-retransidtrsp	The total number of mobility - retransmitted identity response messages sent by the system. Type: Counter	Int32
mobility-recv-idtrsp	The total number of mobility - identity response messages received by the system. Type: Counter	Int32
mobility-recv-retransidtrsp	The total number of mobility - retransmitted identity response messages received by the system. Type: Counter	Int32
mobility-sent-idtrspaccept	The total number of mobility - identity response - accepted messages sent by the system. Type: Counter	Int32
mobility-sent-idtrspdenied	The total number of mobility - identity response - denied messages sent by the system. Type: Counter	Int32
mobility-recv-idtrspaccept	The total number of mobility - identity response - accepted messages received by the system. Type: Counter	Int32

Variables	Description	Data Type
mobility-recv-idtrspdenied	The total number of mobility - identity response - denied messages received by the system. Type: Counter	Int32
mobility-sent-fwdrelreq	The total number of mobility - forward relocation request messages sent by the system. Type: Counter	Int32
mobility-sent-retransfwdrelreq	The total number of mobility - retransmitted forward relocation request messages sent by the system. Type: Counter	Int32
mobility-recv-fwdrelreq	The total number of mobility - forward relocation request messages received by the system. Type: Counter	Int32
mobility-recv-retransfwdrelreq	The total number of mobility - retransmitted forward relocation request messages received by the system. Type: Counter	Int32
mobility-sent-fwdrelrsp	The total number of mobility - forward relocation response messages sent by the system. Type: Counter	Int32
mobility-sent-retransfwdrelrsp	The total number of mobility - retransmitted forward relocation response messages sent by the system. Type: Counter	Int32
mobility-recv-fwdrelrsp	The total number of mobility - forward relocation response messages received by the system. Type: Counter	Int32
mobility-recv-retransfwdrelrsp	The total number of mobility - retransmitted forward relocation response messages received by the system. Type: Counter	Int32
mobility-sent-fwdrelrspaccept	The total number of mobility - forward relocation response - accepted messages sent by the system. Type: Counter	Int32
mobility-sent-fwdrelrspdenied	The total number of mobility - forward relocation response - denied messages sent by the system. Type: Counter	Int32
mobility-recv-fwdrelrspaccept	The total number of mobility - forward relocation response - accepted messages received by the system. Type: Counter	Int32
mobility-recv-fwdrelrspdenied	The total number of mobility - forward relocation response - denied messages received by the system. Type: Counter	Int32
mobility-sent-fwdacctxt	The total number of mobility - forward access context notification messages sent by the system. Type: Counter	Int32

Variables	Description	Data Type
mobility-sent-retransfwdacnnotf	The total number of mobility - retransmitted forward access context notification messages sent by the system. Type: Counter	Int32
mobility-recv-fwdacnnotf	The total number of mobility - forward access context notification messages received by the system. Type: Counter	Int32
mobility-recv-retransfwdacnnotf	The total number of mobility - retransmitted forward access context notification messages received by the system. Type: Counter	Int32
mobility-sent-fwdaccack	The total number of mobility - forward access context acknowledge messages sent by the system. Type: Counter	Int32
mobility-sent-retransfwdaccack	The total number of mobility - retransmitted forward access context acknowledge messages sent by the system. Type: Counter	Int32
mobility-recv-fwdaccack	The total number of mobility - forward access context acknowledge messages received by the system. Type: Counter	Int32
mobility-recv-retransfwdaccack	The total number of mobility - retransmitted forward access context acknowledge messages received by the system. Type: Counter	Int32
mobility-sent-fwdaccackaccept	The total number of mobility - forward access context acknowledge - accepted messages sent by the system. Type: Counter	Int32
mobility-sent-fwdaccackdenied	The total number of mobility - forward access context acknowledge - denied messages sent by the system. Type: Counter	Int32
mobility-recv-fwdaccackaccept	The total number of mobility - forward access context acknowledge - accepted messages received by the system. Type: Counter	Int32
mobility-recv-fwdaccackdenied	The total number of mobility - forward access context acknowledge - denied messages received by the system. Type: Counter	Int32
mobility-sent-fwdrelcmpnotf	The total number of mobility - forward relocation complete notification messages sent by the system. Type: Counter	Int32
mobility-sent-retransfwdrelcmpnotf	The total number of mobility - retransmitted forward relocation complete notification messages sent by the system. Type: Counter	Int32
mobility-recv-fwdrelcmpnotf	The total number of mobility - forward relocation complete notification messages received by the system. Type: Counter	Int32

Variables	Description	Data Type
mobility-recv-retransfwdrelcnpntf	The total number of mobility - retransmitted forward relocation complete notification messages received by the system. Type: Counter	Int32
mobility-sent-fwdrelcnpack	The total number of mobility - forward relocation complete acknowledge messages sent by the system. Type: Counter	Int32
mobility-sent-retransfwdrelcnpack	The total number of mobility - retransmitted forward relocation complete acknowledge messages sent by the system. Type: Counter	Int32
mobility-recv-fwdrelcnpack	The total number of mobility - forward relocation complete acknowledge messages received by the system. Type: Counter	Int32
mobility-recv-retransfwdrelcnpack	The total number of mobility - retransmitted forward relocation complete acknowledge messages received by the system. Type: Counter	Int32
mobility-sent-fwdrelcnpackaccept	The total number of mobility - forward relocation complete acknowledge - accepted messages sent by the system. Type: Counter	Int32
mobility-sent-fwdrelcnpackdenied	The total number of mobility - forward relocation complete acknowledge - denied messages sent by the system. Type: Counter	Int32
mobility-recv-fwdrelcnpackaccept	The total number of mobility - forward relocation complete acknowledge - accepted messages received by the system. Type: Counter	Int32
mobility-recv-fwdrelcnpackdenied	The total number of mobility - forward relocation complete acknowledge - denied messages received by the system. Type: Counter	Int32
mobility-sent-relcancelreq	The total number of mobility - relocation cancel request messages sent by the system. Type: Counter	Int32
mobility-sent-retransrelcancelreq	The total number of mobility - retransmitted relocation cancel request messages sent by the system. Type: Counter	Int32
mobility-recv-relcancelreq	The total number of mobility - relocation cancel request messages received by the system. Type: Counter	Int32
mobility-recv-retransrelcancelreq	The total number of mobility - retransmitted relocation cancel request messages received by the system. Type: Counter	Int32
mobility-sent-relcancelrsp	The total number of mobility - relocation cancel response messages sent by the system. Type: Counter	Int32

Variables	Description	Data Type
mobility-sent-retransrelcancelrsp	The total number of mobility - retransmitted relocation cancel response messages sent by the system. Type: Counter	Int32
mobility-recv-relcancelrsp	The total number of mobility - relocation cancel response messages received by the system. Type: Counter	Int32
mobility-recv-retransrelcancelrsp	The total number of mobility - retransmitted relocation cancel response messages received by the system. Type: Counter	Int32
mobility-sent-relcancelrspaccept	The total number of mobility - relocation cancel response - accepted messages sent by the system. Type: Counter	Int32
mobility-sent-relcancelrspdenied	The total number of mobility - relocation cancel response - denied messages sent by the system. Type: Counter	Int32
mobility-recv-relcancelrspaccept	The total number of mobility - relocation cancel response - accepted messages received by the system. Type: Counter	Int32
mobility-recv-relcancelrspdenied	The total number of mobility - relocation cancel response - denied messages received by the system. Type: Counter	Int32
trace-sent-activate	The total number of trace - activate messages sent by the system. Type: Counter	Int32
trace-recv-activate	The total number of trace - activate messages received by the system. Type: Counter	Int32
trace-sent-deactivate	The total number of trace - deactivate messages sent by the system. Type: Counter	Int32
trace-recv-deactivate	The total number of trace - deactivate messages received by the system. Type: Counter	Int32
gtpv1path-sent-echoeq	The total number of GTPv1 path - echo request messages sent by the system. Type: Counter	Int32
gtpv1path-recv-echoeq	The total number of GTPv1 path - echo request messages received by the system. Type: Counter	Int32
gtpv1path-sent-echoresp	The total number of GTPv1 path - echo response messages sent by the system. Type: Counter	Int32
gtpv1path-recv-echoresp	The total number of GTPv1 path - echo response messages received by the system. Type: Counter	Int32

Variables	Description	Data Type
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 22

FA Schema Statistics

The FA schema provides operational statistics that can be used for monitoring and troubleshooting the following products: GGSN, PDSN, P-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 22. Bulk Statistic Variables in the FA Service Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the FA service. This is a key variable.	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the FA service. This is an internal reference number. This is a key variable.	Int32
servname	The name of the FA service for which the statistics are displayed. This is a key variable.	String
advert-send	The total number of agent advertisement messages sent to the subscriber's mobile node.	Int32
disc-expiry	The total number of sessions that were disconnected due to the expiration of their lifetime setting.	Int32
disc-dereg	The total number of sessions that were disconnected due to de-registrations.	Int32
disc-admin	The total number of sessions that were disconnected due to an administrative clearing of calls (i.e. executing the clear subscriber command).	Int32
auth-attempt	The total number of AAA authentication attempts that were facilitated.	Int32
auth-success	The total number of successful AAA authentication attempts that were facilitate.	Int32
auth-failure	The total number of failed AAA authentication attempts that were facilitated.	Int32
recv-total	The total number of registration requests received.	Int32
recv-initial	The total number of initial registration requests received.	Int32
recv-renewal	The total number of renewal registration requests received.	Int32
recv-dereg	The total number of requests for de-registration received.	Int32
accept-total	The total number of registration requests accepted.	Int32
accept-initial	The total number of initial registration requests accepted.	Int32
accept-renewal	The total number of renewal registration requests accepted.	Int32
accept-dereg	The total number of requests for de-registration accepted.	Int32
denied-total	The total number of registration requests denied.	Int32
denied-initial	The total number of initial registration requests denied.	Int32
denied-renewal	The total number of renewal registration requests denied.	Int32
denied-dereg	The total number of requests for de-registration denied.	Int32
discard-total	The total number of registration requests that were discarded.	Int32
discard-initial	The total number of initial registration requests discarded.	Int32
discard-renewal	The total number of renewal registration requests discarded.	Int32
discard-dereg	The total number of requests for de-registration discarded.	Int32
relayed-total	The total number of registration requests that have been relayed.	Int32
relayed-initial	The total number of initial registration requests relayed.	Int32
relayed-renewal	The total number of renewal registration requests relayed.	Int32

Variables	Description	Data Type
relayed-dereg	The total number of requests for de-registration relayed.	Int32
authfail-total	The total number of registration requests that failed authentication.	Int32
authfail-initial	The total number of initial registration requests that failed authentication.	Int32
authfail-renewal	The total number of renewal registration requests that failed authentication.	Int32
authfail-dereg	The total number of requests for de-registration that failed authentication.	Int32
denied-pdsn-total	The total number of registration requests that have been denied by the Packet Data Service Node/Foreign Agent (PDSN/FA). Reasons for a PDSN/FA denial are described later in this table.	Int32
denied-pdsn-initial	The total number of initial registration requests that were denied by the PDSN/FA. Reasons for a PDSN/FA denial are described later in this table.	Int32
denied-pdsn-renewal	The total number of renewal registration requests denied by the PDSN/FA. Reasons for a PDSN/FA denial are described later in this table.	Int32
denied-pdsn-dereg	The total number of requests for de-registration that were denied by the PDSN/FA. Reasons for a PDSN/FA denial are described later in this table.	Int32
denied-ha-total	The total number of registration requests that have been denied by the Home Agent (HA). Reasons for a HA denial are described later in this table.	Int32
denied-ha-initial	The total number of initial registration requests denied by the HA. Reasons for a HA denial are described later in this table.	Int32
denied-ha-renewal	The total number of renewal registration requests denied by the HA. Reasons for a HA denial are described later in this table.	Int32
denied-ha-dereg	The total number of requests for de-registration that were denied by the HA. Reasons for a HA denial are described later in this table.	Int32
denied-pdsn-unspec	The total number of registration requests for which an FA reply code of 40H (Registration Denied - reason unspecified) was sent.	Int32
denied-pdsn-timeout	The total number of registration requests for which a FA reply code of 4EH (Registration Denied - registration timeout) was sent.	Int32
denied-pdsn-admin	The total number of registration requests for which a FA reply code of 41H (Registration Denied - administratively prohibited) was sent.	Int32
denied-pdsn-resource	The total number of registration requests for which a FA reply code of 42H (Registration Denied - insufficient resources) was sent.	Int32
denied-pdsn-mnauth	The total number of registration requests for which a FA reply code of 43H (Registration Denied - mobile node failed authentication) was sent.	Int32
denied-pdsn-haauth	The total number of registration requests for which a FA reply code of 44H (Registration Denied - home agent authentication failure) was sent.	Int32
denied-pdsn-lifetoolong	The total number of registration requests for which a FA reply code of 45H (Registration Denied - requested lifetime too long) was sent.	Int32
denied-pdsn-badreq	The total number of registration requests for which a FA reply code of 46H (Registration Denied - administratively prohibited) was sent.	Int32

Variables	Description	Data Type
denied-pdsn-badreply	The total number of registration requests for which a FA reply code of 47H (Registration Denied - poorly formed reply) was sent.	Int32
denied-pdsn-missnai	The total number of registration requests for which a FA reply code of 61H (Registration Denied - missing NAI) was sent.	Int32
denied-pdsn-misshomeagent	The total number of registration requests for which a FA reply code of 62H (Registration Denied - missing home agent) was sent.	Int32
denied-pdsn-misshomeaddr	The total number of registration requests for which a FA reply code of 60H (Registration Denied - missing home address) was sent.	Int32
denied-pdsn-unkchallenge	The total number of registration requests for which a FA reply code of 68H (Registration Denied - unknown challenge) was sent.	Int32
denied-pdsn-misschallenge	The total number of registration requests for which a FA reply code of 69H (Registration Denied - missing challenge) was sent.	Int32
denied-pdsn-stalechallenge	The total number of registration requests for which a FA reply code of 6AH (Registration Denied - stale challenge) was sent.	Int32
denied-pdsn-mntoodistant	The total number of registration requests for which a FA reply code of 4CH (Registration Denied - reverse tunneling mobile node too distant) was sent.	Int32
denied-pdsn-styleunavail	The total number of registration requests for which a FA reply code of 4FH (Registration Denied - reverse tunneling delivery style unavailable) was sent.	Int32
denied-pdsn-hanetunreach	The total number of registration requests for which a FA reply code of 50H (Registration Denied - home network unreachable (ICMP error received)) was sent.	Int32
denied-pdsn-hahostunreach	The total number of registration requests for which a FA reply code of 51H (Registration Denied - home agent host unreachable (ICMP error received)) was sent.	Int32
denied-pdsn-haportunreach	The total number of registration requests for which a FA reply code of 52H (Registration Denied - home agent port unreachable (ICMP error received)) was sent.	Int32
denied-pdsn-haunreach	The total number of registration requests for which a FA reply code of 58H (Registration Denied - home agent unreachable (other ICMP error received)) was sent.	Int32
denied-pdsn-invcoa	The total number of registration requests for which a FA reply code of 4DH (Registration Denied - invalid care-of address) was sent.	Int32
denied-pdsn-encapunavail	The total number of registration requests for which a FA reply code of 48H (Registration Denied - requested encapsulation unavailable) was sent.	Int32
denied-pdsn-revtununavail	The total number of registration requests for which a FA reply code of 4AH (Registration Denied - requested reverse tunnel unavailable) was sent.	Int32
denied-pdsn-revtunmand	The total number of registration requests for which a FA reply code of 4BH (Registration Denied - reverse tunnel is mandatory and 'T' bit not set) was sent.	Int32
denied-pdsn-unknowncvse	The total number of registration requests for which a PDSN reply code of 8DH (Registration Denied - unsupported vendor ID or unable to interpret data in the CVSE) was received.	Int32
denied-ha-faauth	The total number of registration requests for which a HA reply code of 84H (Registration Denied - foreign agent failed authentication) was received.	Int32

Variables	Description	Data Type
denied-ha-badreq	The total number of registration requests for which a HA reply code of 86H (Registration Denied - poorly formed request) was received.	Int32
denied-ha-mismatchid	The total number of registration requests for which a HA reply code of 85H (Registration Denied - registration Identification mismatch) was received.	Int32
denied-ha-simulbind	The total number of registration requests for which a HA reply code of 87H (Registration Denied - too many simultaneous mobility bindings) was received.	Int32
denied-ha-unknownha	The total number of registration requests for which a HA reply code of 88H (Registration Denied - unknown home agent address) was received.	Int32
denied-ha-revtununavail	The total number of registration requests for which a HA reply code of 89H (Registration Denied - reverse tunneling unavailable) was received.	Int32
replyrcv-total	The total number of registration replies received. This total includes initial, renewal and de-registration registration replies.	Int32
replyrcv-totalrelayed	The total number of registration replies relayed. This total includes initial, renewal and de-registration registration replies.	Int32
replyrcv-errors	The total number of registration replies that contained errors.	Int32
replyrcv-initial	The total number of initial registration replies received.	Int32
replyrcv-initialrelayed	The total number of initial registration replies relayed.	Int32
replyrcv-renewal	The total number of renewal registration replies received.	Int32
replyrcv-renewalrelayed	The total number of renewal registration replies relayed.	Int32
replyrcv-dereg	The total number of replies for de-registration received.	Int32
replyrcv-deregrelayed	The total number of replies for de-registration relayed.	Int32
reqsent-initial	The total number of initial FA registration requests sent.	Int32
reqsent-initial-resend	The total number of initial FA registration requests re-sent.	Int32
reqsent-initial-norend	The total number of initial FA registration requests that were not re-sent.	Int32
reqsent-renew	The total number of FA registration renewal requests that were sent.	Int32
reqsent-renew-resend	The total number of FA registration renewal requests that were re-sent.	Int32
reqsent-renew-norend	The total number of FA registration renewal requests that were not re-sent.	Int32
reqsent-dereg	The total number of FA de-registration requests that were sent.	Int32
reqsent-dereg-resend	The total number of FA de-registration requests that were re-sent.	Int32
reqsent-dereg-norend	The total number of FA de-registration requests that were not re-sent.	Int32
replysent-total	The total number of registration replies sent.	Int32

Variables	Description	Data Type
replysent-acceptreg	The total number of successful registration replies sent.	Int32
replysent-acceptdereg	The total number of successful de-registration replies sent.	Int32
replysent-badreq	The total number of registration replies that were sent with a reply code of 46H (Registration Denied - poorly formed reply).	Int32
replysent-badreply	The total number of registration replies that were sent with a reply code of 47H (Registration Denied - poorly formed reply).	Int32
replysent-unspecified	The total number of registration replies that were sent with a reply code of 40H (Registration Denied - reason unspecified).	Int32
replysent-adminprohib	The total number of registration replies that were sent with a reply code of 41H (Registration Denied - administratively prohibited).	Int32
replysent-noresources	The total number of registration replies that were sent with a reply code of 42H (Registration Denied - insufficient resources).	Int32
replysent-mnauthfail	The total number of registration replies that were sent with a reply code of 43H (Registration Denied - mobile node failed authentication).	Int32
replysent-haauthfail	The total number of registration replies that were sent with a reply code of 44H (Registration Denied - home agent failed authentication).	Int32
replysent-lifetoolong	The total number of registration replies that were sent with a reply code of 45H (Registration Denied - requested lifetime too long).	Int32
replysent-revtununavail	The total number of registration replies that were sent with a reply code of 4AH (Registration Denied - reverse tunneling unavailable).	Int32
replysent-revtunmand	The total number of registration replies that were sent with a reply code of 4BH (Registration Denied - reverse tunneling mandatory).	Int32
replysent-delstyleunavail	The total number of registration replies that were sent with a reply code of 4FH (Registration Denied - reverse tunneling delivery style unavailable).	Int32
replysent-mntoodistant	The total number of registration replies sent with a reply code of 4CH (Registration Denied - reverse tunneling mobile node too distant).	Int32
replysent-invcoa	The total number of registration replies sent with a reply code of 4DH (Registration Denied - invalid care-of address).	Int32
replysent-regtimeout	The total number of registration replies sent with a reply code of 4EH (Registration Denied - registration timeout).	Int32
replysent-hanetunreach	The total number of registration requests sent with an FA reply code of 50H (Registration Denied - home network unreachable (ICMP error received)).	Int32
replysent-hahostunreach	The total number of registration requests sent with an FA reply code of 51H (Registration Denied - home agent host unreachable (ICMP error received)).	Int32
replysent-haportunreach	The total number of registration requests sent with an FA reply code of 52H (Registration Denied - home agent port unreachable (ICMP error received)).	Int32
replysent-haunreach	The total number of registration requests sent with an FA reply code of 58H (Registration Denied - home agent unreachable (other ICMP error received)).	Int32

Variables	Description	Data Type
replysent-missnai	The total number of registration replies sent with a reply code of 61H (Registration Denied - missing NAI).	Int32
replysent-misshomeagent	The total number of registration replies sent with a reply code of 62H (Registration Denied - missing home agent).	Int32
replysent-misshomeaddr	The total number of registration replies sent with a reply code of 60H (Registration Denied - missing home address).	Int32
replysent-unkchallenge	The total number of registration replies sent with a reply code of 68H (Registration Denied - unknown challenge).	Int32
replysent-misschallenge	The total number of registration replies sent with a reply code of 69H (Registration Denied - missing challenge).	Int32
replysent-stalechallenge	The total number of registration replies sent with a reply code of 6AH (Registration Denied - challenge).	Int32
replysent-senderrors	The total number of errors that occurred while sending replies.	Int32
ttlprepaid	The total number of Prepaid calls facilitated by the service.	Int32
curprepaid	The total number of Prepaid calls currently being facilitated by the service.	Int32
ttlonlineauthsucc	The total number of successful Online Authentications for the service.	Int32
ttlonlineauthfail	TThe total number of successful Online Authentications for the service.	Int32
revoc-sent	The total number of FA registration revocations sent.	Int32
revoc-retry-sent	The total number of FA registration revocation messages the system attempted to re-send.	Int32
revoc-ack-recv	The total number of FA registration revocation acknowledgement messages received.	Int32
revoc-timeout	The total number of timeouts that occurred during FA registration revocations.	Int32
revoc-recv	The total number of FA registration revocations received	Int32
revoc-ack-sent	The total number of The total number of FA registration revocation acknowledgement messages sent.	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 23

FNG Schema Statistics

The FNG schema provides operational statistics that can be used for monitoring and troubleshooting the Femto Network Gateway.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 23. Bulk Statistic Variables in the FNG Schema

Variables	Description	Data Type
vpnname	Description: The name of the context currently facilitating the service processing the subscriber session. This is a key variable.	String

Variables	Description	Data Type
vpnid	Description: The identification number of the context currently facilitating the service processing the subscriber session. This is an internal reference number. This is a key variable.	Int32
svcname	Description: Service name for which FNG statistics are being displayed. This is a key variable.	String
svcid	Description: Service ID for which FNG statistics are being displayed. This is a key variable.	Int32
bindaddress	Description: The bind IP address for this FNG service.	String
state	Description: System-wide FNG state identified by the following codes: - unknown - inservice: At least one FNG service is available. - outofservice: No FNG service is currently active, but one or more FNG services are configured.	String
sess-curinprog	Description: Number of FNG sessions in progress (including transient ones).	Int32
sess-curact	Description: Number of currently active FNG sessions.	Int32
sess-curdorm	Description: Number of currently dormant FNG sessions.	Int32
sess-curactipv4	Description: Number of currently active IPV4 sessions.	Int32
sess-ttlsetup	Description: Total number of FNG session setups.	Int32
sess-ttlattempt	Description: Total number of FNG session attempts.	Int32
sess-ttlattemptfail	Description: Total number of FNG session attempts failed.	Int32
sess-ttlrel	Description: Total number of FNG sessions released.	Int32
sess-ttlrellocal	Description: Total number of FNG sessions released locally.	Int32
sess-ttlrelremote	Description: Total number of FNG sessions released remotely.	Int32
sess-remaining	Description: Number of FNG sessions remaining.	Int32
sess-limit	Description: Session limit.	Int32
sess-discbeforeconn	Description: Number of FNG sessions disconnected by remote before being connected.	Int32
sess-discipsec	Description: Number of FNG sessions terminated because of IPSec.	Int32
sess-discadmin	Description: Number of FNG sessions terminated because of administrator release.	Int32
sess-discidletimeout	Description: Number of FNG sessions terminated because of idle timer timeout.	Int32
sess-discabstimeout	Description: Number of FNG sessions terminated because of absolute timeout.	Int32
sess-disclongdur	Description: Number of FNG sessions terminated because of long duration timer timeout.	Int32
sess-discsesssetuptimeout	Description: Number of FNG sessions terminated because of Session Manager session setup timeout.	Int32

Variables	Description	Data Type
sess-discnoresource	Description: Number of FNG sessions terminated because of no resources.	Int32
sess-discauthfail	Description: Number of FNG sessions terminated because of AAA authentication failure.	Int32
sess-discflowaddfail	Description: Number of FNG sessions terminated because of flow add failure.	Int32
sess-discinvdestctx	Description: Number of FNG sessions terminated because of invalid destination context.	Int32
sess-discsourceviol	Description: Number of FNG sessions terminated because of source IP address violation.	Int32
sess-discdupreq	Description: Number of FNG sessions terminated because of a duplicated request.	Int32
sess-discaddrfail	Description: Number of FNG sessions terminated because of an address failure.	Int32
sess-discmisc	Description: Number of FNG sessions terminated for miscellaneous reasons.	Int32
eap-rxttlsvrpass thru	Description: Total number of EAP messages received from the EAP server in pass-through mode.	Int32
eap-rxchalsvrpass thru	Description: Total number of EAP challenge messages sent to the EAP server in pass-through mode.	Int32
eap-rxsuccsvrpass thru	Description: Total number of EAP success messages received from the EAP server in pass-through mode.	Int32
eap-rxfailsvrpass thru	Description: Total number of EAP failure messages received from the EAP server in pass-through mode.	Int32
eap-xttlsvrpass thru	Description: Total number of EAP messages transmitted to the EAP server in pass-through mode.	Int32
eap-txinitreqsvrpass thru	Description: Total number of EAP messages transmitted to the EAP server in pass-through mode for initial request.	Int32
eap-txfwdreqsvrpass thru	Description: Total number of EAP messages transmitted to the EAP server in pass-through mode for forward request.	Int32
ipsec-txpacket	Description: Number of IPSec packets transmitted.	Int64
ipsec-txoctet	Description: Number of IPSec bytes transmitted.	Int64
ipsec-rxpacket	Description: Number of IPSec packets received.	Int64
ipsec-rxoctet	Description: Number of IPSec bytes received.	Int64



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 24

GPRS Schema Statistics

The GPRS schema provides operational statistics that can be used for monitoring and troubleshooting the following products: 2G SGSN

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 24. Bulk Statistic Variables in the GPRS Service Schema

Variables	Description	Data Type
vpnname	Description The name of the context configured on the system that is currently facilitating the GPRS service. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	Description The identification number of the context configured on the system that is currently facilitating the GPRS service. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	Description The name of the GPRS service configured on the system for which the statistics are displayed. This is a key variable. Type: Information	String
nse-id	Description The network service entity identifier in this GPRS service. This is a key variable. Type: Information	Int32
ns-num-bytes-rcvd	This statistic has been deprecated.	
ns-num-bytes-sent	This statistic has been deprecated.	
ns-num-nsvc-failed	This statistic has been deprecated.	
ns-num-nsvc-congest	This statistic has been deprecated.	
ns-num-unit-data-msg-rcvd	This statistic has been deprecated.	
ns-num-unit-data-msg-sent	This statistic has been deprecated.	
ns-num-alive-pdu-rcvd	This statistic has been deprecated.	
ns-num-alive-pdu-sent	This statistic has been deprecated.	
ns-num-alive-ack-pdu-rcvd	This statistic has been deprecated.	
ns-num-alive-ack-pdu-sent	This statistic has been deprecated.	
ns-num-block-pdu-rcvd	This statistic has been deprecated.	
ns-num-block-pdu-sent	This statistic has been deprecated.	
ns-num-block-ack-pdu-rcvd	This statistic has been deprecated.	
ns-num-block-ack-pdu-sent	This statistic has been deprecated.	
ns-num-unblock-pdu-rcvd	This statistic has been deprecated.	
ns-num-unblock-pdu-sent	This statistic has been deprecated.	

Variables	Description	Data Type
ns-num-unblock-ack-pdu-rcvd	This statistic has been deprecated.	
ns-num-unblock-ack-pdu-sent	This statistic has been deprecated.	
ns-num-reset-pdu-rcvd	This statistic has been deprecated.	
ns-num-reset-pdu-sent	This statistic has been deprecated.	
ns-num-reset-ack-pdu-rcvd	This statistic has been deprecated.	
ns-num-reset-ack-pdu-sent	This statistic has been deprecated.	
ns-num-status-pdu-rcvd	This statistic has been deprecated.	
ns-num-status-pdu-sent	This statistic has been deprecated.	
num-sns-size-rcvd	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) size messages received by the SGSN. Triggers: Increments upon receiving the SNS size from the BSC. Availability: per SGSN Type: Counter	Int32
num-sns-size-ack-sent	Description: This proprietary statistic indicates the total number of ACK messages sent for Sub-Network Service (SNS) messages by the network service entity. Triggers: Increments after sending a SNS size ACK to the BSC. Availability: per SGSN Type: Counter	Int32
num-sns-size-fail-rcvd-unknown-nse	Description: This proprietary statistic indicates the total number of SNS size messages failed due to unknown network service entity. Triggers: Increments upon receiving SNS size messages from an unknown NSE (such as a BSC) with the reset flag unset. Availability: per SGSN Type: Counter	Int32
num-sns-config-rcvd	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages received by the SGSN. Triggers: Increments upon receiving SNS configuration from the BSC. Availability: per SGSN Type: Counter	Int32
num-sns-config-sent	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages sent by the SGSN. Triggers: Increments after sending SNS configuration to the BSC. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
num-sns-config-ack-sent	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration ACK messages sent by the SGSN. Triggers: Increments after sending SNS configuration ACK to the BSC. Availability: per SGSN Type: Counter	Int32
num-sns-config-ack-rcvd	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration ACK messages received by the SGSN. Triggers: Increments upon receiving SNS configuration ACK from the BSC. Availability: per SGSN Type: Counter	Int32
sns-config-fail-rcv-pdu-not-compat-state	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed as received packet data unit was not compatible with the message state in the SGSN. Availability: per SGSN Type: Counter	Int32
sns-config-fail-sent-pdu-not-compat-state	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed as sent packet data unit was not compatible with the message state in the peer entity. Availability: per SGSN Type: Counter	Int32
sns-config-fail-rcv-inval-ipv4-endpt	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to invalid number of IPv4 endpoints in a received message. Triggers: Increments when the number of IPv4 endpoints received in an SNS configuration message exceeds the maximum number of endpoints (received in SNS size messages). Availability: per SGSN Type: Counter	Int32
sns-config-fail-sent-inval-ipv4-endpt	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to invalid number of IPv4 endpoints in a sent message. Triggers: Increments upon receiving SNS configuration ACK from a BSC with cause indicating an invalid number of IPv4 endpoints. Availability: per SGSN Type: Counter	Int32
sns-config-fail-rcv-inval-ipv6-endpt	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to invalid number of IPv6 endpoints in a received message. Triggers: Increments when the number of IPv6 endpoints received in an SNS configuration message exceeds the maximum number of endpoints (received in SNS size messages). Availability: per SGSN Type: Counter	Int32
sns-config-fail-sent-inval-ipv6-endpt	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to invalid number of IPv6 endpoints in sent message. Triggers: Increments upon receiving SNS configuration ACK from a BSC with cause indicating an invalid number of IPv6 endpoints. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
sns-config-fail-rcv-prot-err-unspec	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to an unspecified protocol error in a received message. Availability: per SGSN Type: Counter	Int32
sns-config-fail-sent-prot-err-unspec	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to unspecified protocol error in a sent message. Triggers: Increments upon receiving SNS configuration ACK from a BSC with cause indicating an unspecified protocol error. Availability: per SGSN Type: Counter	Int32
sns-config-fail-rcv-inval-essential-param	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to invalid mandatory parameters in a received message. Triggers: Increments upon receiving SNS configuration with an IP address of 0.0.0.0 or 255.255.255.255. Availability: per SGSN Type: Counter	Int32
sns-config-fail-sent-inval-essential-param	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to invalid mandatory parameters in a sent message. Availability: per SGSN Type: Counter	Int32
sns-config-fail-rcv-internal-err	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to internal error in a received message. Triggers: Increments upon receiving an unexpected SNS configuration or the peer NSVL configuration fails in the SGSN due to a software issue. Availability: per SGSN Type: Counter	Int32
sns-config-fail-sent-internal-err	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to internal error in a sent message. Availability: per SGSN Type: Counter	Int32
sns-config-fail-rcv-inval-weight	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to invalid weight bit in a received message. Triggers: Increments when the total signaling or data weight of all endpoints received in the SNS configuration is zero. Availability: per SGSN Type: Counter	Int32
sns-config-fail-sent-inval-weight	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration messages failed due to invalid weight bit in a sent message. Triggers: Increments upon receiving SNS configuration ACK from a BSC with cause indicating invalid weights. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
sns-config-fail-sent-no-rsp-from-peer	Description: This proprietary statistic indicates the total number of Sub-Network Service (SNS) configuration message failed due to no response from a peer. Triggers: Increments following the expiration of a TSNS provisioning (all attempts over) for a SNS configuration. Availability: per SGSN Type: Counter	Int32
num-sns-add-rcvd	Description: This proprietary statistic indicates the total number of SNS-ADD messages received. Triggers: Increments upon receiving an SNS-ADD message. Availability: per SGSN Type: Counter	Int32
num-sns-add-sent	Description: This proprietary statistic indicates the total number of SNS-ADD messages sent. Triggers: Increments after sending an SNS-ADD message. Availability: per SGSN Type: Counter	Int32
sns-add-fail-rcv-pdu-not-compat-state	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed as received packet data unit was not compatible with the message state in the SGSN. Availability: per SGSN Type: Counter	Int32
sns-add-fail-sent-pdu-not-compat-state	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed as sent packet data unit was not compatible with the message state in the peer entity. Triggers: Increments upon receiving an SNS-ACK with a causecode indicating the PDU is not compatible with the protocol for the SNS-ADD message. Availability: per SGSN Type: Counter	Int32
sns-add-fail-rcv-inval-ipv4-endpt	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to an invalid number of IPv4 endpoints in a received message. Triggers: Increments when the number of IPv4 endpoints received in an SNS-ADD message plus the number of IPv4 endpoints received in the SNS configuration exceeds the maximum number of endpoints (as received in the SNS size message). Availability: per SGSN Type: Counter	Int32
sns-add-fail-sent-inval-ipv4-endpt	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to invalid number of IPv4 endpoints in a sent message. Triggers: Increments on receiving SNS-ACK with cause “invalid number of IPv4 endpoints” for SNS-ADD. Availability: per SGSN Type: Counter	Int32
sns-add-fail-rcv-inval-ipv6-endpt	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to invalid number of IPv6 endpoints in a received message. Triggers: Increments when the number of IPv6 endpoints received in an SNS-ADD message plus the number of IPv6 endpoints received in the SNS configuration exceeds the maximum number of endpoints (as received in the SNS size message). Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
sns-add-fail-sent-inval-ipv6-endpt	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to invalid IPv6 address of endpoint in a sent message. Triggers: Increments on receiving SNS-ACK with cause “invalid number of IPv6 endpoints” for SNS-ADD. Availability: per SGSN Type: Counter	Int32
sns-add-fail-rcv-prot-err-unspec	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to an unspecified protocol error in a received message. Triggers: Increments when an SNS-ADD is received before the SNS configuration. Availability: per SGSN Type: Counter	Int32
sns-add-fail-sent-prot-err-unspec	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to unspecified protocol error in sent message. Triggers: Increments on receiving SNS-ACK with cause “protocol error-unspecified”. Availability: per SGSN Type: Counter	Int32
sns-add-fail-rcv-inval-essential-param	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to invalid mandatory parameters in received message. Triggers: Increments upon receiving an SNS-ADD containing an IP address of 0.0.0.0 or 255.255.255.255. Availability: per SGSN Type: Counter	Int32
sns-add-fail-sent-inval-essential-param	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to invalid mandatory parameters in sent message. Availability: per SGSN Type: Counter	Int32
sns-add-fail-rcv-internal-err	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to internal error in received message. Triggers: Increments upon receiving an SNS-ADD if the SGSN is not able to create an NSVC towards the new remote endpoint due to an internal error. Availability: per SGSN Type: Counter	Int32
sns-add-fail-sent-internal-err	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to internal error in sent message. Triggers: Increments after sending an SNS-ACK with a cause code indicating equipment failure for the SNS-ADD. Availability: per SGSN Type: Counter	Int32
sns-add-fail-rcv-inval-weight	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to invalid weight bit in received message. Triggers: Increments upon receiving an SNS-ADD if the total sum of the signaling or data weight of all remote endpoint is 0 (zero). Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
sns-add-fail-sent- inval-weight	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to invalid weight bit in sent message. Triggers: Increments after sending an SNS-ACK with a cause code indicating invalid weights for the SNS-ADD. Availability: per SGSN Type: Counter	Int32
sns-add-fail-sent-no- rsp-from-peer	Description: This proprietary statistic indicates the total number of SNS-ADD messages failed due to no response from peer. Triggers: Increments following the expiration of a TSNS-PROV (all attempts over) for SNS-ADD. Availability: per SGSN Type: Counter	Int32
num-sns-delete-rcvd	Description: This proprietary statistic indicates the total number of SNS-DELETE messages received. Triggers: Increments upon receiving a SNS-DELETE message. Availability: per SGSN Type: Counter	Int32
num-sns-delete-sent	Description: This proprietary statistic indicates the total number of SNS-DELETE messages sent. Triggers: Increments after sending a SNS-DELETE message. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-rcv- pdu-not-compat-state	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed as received packet data unit was not compatible with the message state in the SGSN. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-sent- pdu-not-compat-state	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed as sent packet data unit was not compatible with the message state in the remote entity. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the PDU is not compatible with the protocol for the SNS-DELETE message. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-rcv- unknown-ip-endpt	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to an unknown IP endpoint in a received message. Triggers: Increments when a SNS-DELETE is received from an unknown NSE or the SNS-DELETE contains all unknown IP endpoints. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-sent- unknown-ip-endpt	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to unknown endpoint in a sent message. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the SNS-DELETE message contains unknown IP endpoints. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
sns-delete-fail-rcv-unknown-ip-address	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to invalid IP address in a received message. Triggers: Increments when the SNS-DELETE contains an unknown IP address. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-sent-unknown-ip-address	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to invalid IP address in a sent message. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the SNS-DELETE message contained an unknown IP address. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-rcv-prot-err-unspec	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to unspecified protocol error in received message. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-sent-prot-err-unspec	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to unspecified protocol error in sent message. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the SNS-DELETE message contained an unspecified protocol error. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-rcv-inval-essential-param	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to invalid mandatory parameters in received message. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-sent-inval-essential-param	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to invalid mandatory parameters in sent message. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the SNS-DELETE message contained an invalid essential information element (IE). Availability: per SGSN Type: Counter	Int32
sns-delete-fail-rcv-internal-err	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to internal error in received message. Availability: per SGSN Type: Counter	Int32
sns-delete-fail-sent-internal-err	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to internal error in sent message. Triggers: Increments after sending an SNS-ACK with a cause code indicating “internal error” for the SNS-DELETE. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
sns-delete-fail-sent-no-rsp-from-peer	Description: This proprietary statistic indicates the total number of SNS-DELETE messages failed due to no response from peer. Triggers: Increments following the expiration of TSNS provisioning (all attempts over) for SNS-DELETE. Availability: per SGSN Type: Counter	Int32
num-sns-cw-rcvd	Description: This proprietary statistic indicates the total number of SNS-change-weight size messages received by the SGSN. Triggers: Increments upon receiving a SNS-change-weight message. Availability: per SGSN Type: Counter	Int32
num-sns-cw-sent	Description: This proprietary statistic indicates the total number of SNS-change-weight messages sent by the SGSN. Triggers: Increments after sending a SNS-change-weight message. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-rcv-pdu-not-compat-state	Description: This proprietary statistic indicates the total number of SNS-change-weight messages that failed as the received PDU was not compatible with the message state. Triggers: Increments upon receiving an SNS-change-weight from an unknown NSE. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-sent-pdu-not-compat-state	Description: This proprietary statistic indicates the total number of SNS-change-weight messages sent by the SGSN that failed because the sent PDU was not compatible with the message state. Triggers: Increments after sending an SNS-ACK with a cause code indicating the PDU is not compatible with the protocol for the SNS-change-weight message. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-rcv-inval-weight	Description: This proprietary statistic indicates the total number of SNS-change-weight messages that failed due to invalid weight in the received message. Triggers: Increments when applying the weights received in a SNS-change-weight message would result in the total weight equaling zero. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-sent-inval-weight	Description: This proprietary statistic indicates the total number of SNS-change-weight messages sent by the SGSN that failed due to invalid weight in the sent message. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the SNS-change-weight message contains invalid weights. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-rcv-unknown-ip-endpt	Description: This proprietary statistic indicates the total number of SNS-change-weight messages that failed due to unknown IP endpoint in the received message. Triggers: Increments when the SGSN receives an SNS-change-weight message containing an unknown IP endpoint. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
sns-cw-fail-sent-unknown-ip-endpt	Description: This proprietary statistic indicates the total number of SNS-change-weight messages sent by the SGSN that failed due to unknown IP endpoint in the sent message. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the SNS-change-weight message contained an unknown IP endpoint. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-rcv-unknown-ip-addr	Description: This proprietary statistic indicates the total number of SNS-change-weight messages that failed due to an unknown IP address in the received message. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-sent-unknown-ip-addr	Description: This proprietary statistic indicates the total number of SNS-change-weight messages sent by the SGSN that failed due to unknown IP address in sent message. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the SNS-change-weight message contained an unknown IP address. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-rcv-prot-err-unspec	Description: This proprietary statistic indicates the total number of SNS-change-weight message failed due to unspecified protocol error in received message. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-sent-prot-err-unspec	Description: This proprietary statistic indicates the total number of SNS-change-weight message sent by the SGSN failed due to unspecified protocol error in sent message. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the SNS-change-weight message contained an unspecified protocol error. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-rcv-inval-essential-param	Description: This proprietary statistic indicates the total number of SNS-change-weight message failed due to invalid mandatory parameters in received message. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-sent-inval-essential-param	Description: This proprietary statistic indicates the total number of SNS-change-weight messages sent by the SGSN which failed due to invalid mandatory parameters in the sent messages. Triggers: Increments upon receiving an SNS-ACK with a cause code indicating the SNS-change-weight message contained an invalid essential information element (IE). Availability: per SGSN Type: Counter	Int32
sns-cw-fail-rcv-internal-err	Description: This proprietary statistic indicates the total number of SNS-change-weight messages that failed due to internal error(s) in the received message. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
sns-cw-fail-sent-internal-err	Description: This proprietary statistic indicates the total number of SNS-change-weight messages sent by the SGSN that failed due to internal error(s) in the sent message. Triggers: Increments after sending an SNS-ACK with a cause code indicating equipment failure for the SNS-change-weight. Availability: per SGSN Type: Counter	Int32
sns-cw-fail-sent-no-rsp-from-peer	Description: This proprietary statistic indicates the total number of SNS-change-weight messages sent by the SGSN that failed due to no response from the peer. Triggers: Increments following the expiration of a TSNS provisioning attempt for a SNS-change-weight. Availability: per SGSN Type: Counter	Int32
sns-num-ack-rcvd	Description: This proprietary statistic indicates the total number of SNS-ACK messages received. Triggers: Increments upon receiving an SNS-ACK. Availability: per SGSN Type: Counter	Int32
sns-num-ack-sent	Description: This proprietary statistic indicates the total number of SNS-ACK messages sent. Triggers: Increments after sending an SNS-ACK. Availability: per SGSN Type: Counter	Int32
sns-num-unknown-msg	Description: This proprietary statistic indicates the total number of unknown messages received. Availability: per SGSN Type: Counter	Int32
sns-num-status-pdu-sent	Description: This proprietary statistic indicates the total number of NS-STATUS messages sent in response to SNS messages or because of NSVC going down. Availability: per SGSN Type: Counter	Int32
bssgp-total-usr-req-drop	Description: This proprietary statistic indicates the total number of LLC packets dropped at the BSSGP layer. Triggers: Increments upon dropping of an LLC packet. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-unknown-bvc	Description: This proprietary statistic indicates the total number of LLC packets dropped at the BSSGP layer because of unknown BVC. Triggers: Increments upon dropping of an LLC packet due to unknown BVC. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-blocked-bvc	Description: This proprietary statistic indicates the total number of LLC packets dropped at the BSSGP layer because of blocked BVC. Triggers: Increments upon dropping of an LLC packet due to blocked BVC. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
bssgp-usr-req-drop-encoding-fail	Description: This proprietary statistic indicates the total number of LLC packets dropped at the BSSGP layer because of encoding failure. Triggers: Increments upon dropping of an LLC packet due to encoding failure. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-bvc-flow-ctrl-rvcd	Description: This proprietary statistic indicates the total number of flow control BVC messages received from the BSC. Triggers: Increments upon receipt of a flow control BVC message. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-bvc-flow-ctrl-ack-sent	Description: This proprietary statistic indicates the total number of flow control BVC ACK messages sent to the BSC. Triggers: Increments after sending a flow control BVC ACK message. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-block-rvcd	Description: This proprietary statistic indicates the total number of BVC-Block messages received from the BSC. Triggers: Increments upon receiving a BVC-Block message. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-block-ack-sent	Description: This proprietary statistic indicates the total number of BVC BLOCK ACK messages sent. Triggers: Increments after sending a BVC-Block-Ack message. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-unblock-rvcd	Description: This proprietary statistic indicates the total number of BVC UNBLOCK messages received. Triggers: Increments upon receiving a BVC-Unblock message. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-unblock-ack-sent	Description: This proprietary statistic indicates the total number of BVC UNBLOCK ACK messages sent. Triggers: Increments after sending a BVC-Unblock-Ack message. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-bvc-reset-sent	Description: This proprietary statistic indicates the total number of BVC RESET messages sent. Triggers: Increments after sending a BVC-Reset message. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-bvc-reset-rvcd	Description: This proprietary statistic indicates the total number of BVC RESET messages received. Triggers: Increments upon receiving a BVC-Reset message. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
bssgp-usr-req-drop-bvc-reset-ack-sent	Description: This proprietary statistic indicates the total number of BVC RESET ACK messages sent. Triggers: Increments after sending a BVC-Reset-Ack message. Availability: per SGSN Type: Counter	Int32
bssgp-usr-req-drop-bvc-reset-ack-rcvd	Description: This proprietary statistic indicates the total number of BVC RESET ACK messages received. Triggers: Increments upon receiving a BVC-Reset-Ack message. Availability: per SGSN Type: Counter	Int32
bssgp-bvc-status-msg-sent	Description: This proprietary statistic indicates the total number of BVC status messages sent. Triggers: Increments after sending a BVC-Status message. Availability: per SGSN Type: Counter	Int32
bssgp-bvc-status-msg-rcvd	Description: This proprietary statistic indicates the total number of BVC status messages received. Triggers: Increments upon receiving a BVC-Status message. Availability: per SGSN Type: Counter	Int32
bssgp-flush-llc-msg-sent	Description: This proprietary statistic indicates the total number of BSSGP FLUSH LL (Logical Link) messages sent. Triggers: Increments after sending a Flush-LL message. Availability: per SGSN Type: Counter	Int32
bssgp-flush-llc-ack-msg-rcvd	Description: This proprietary statistic indicates the total number of BSSGP FLUSH LL (Logical Link) ACK messages received. Triggers: Increments upon receiving a Flush-LL-Ack message. Availability: per SGSN Type: Counter	Int32
bssgp-cs-paging-msg-sent	Description: This proprietary statistic indicates the total number of BSSGP circuit switched (CS) paging messages sent. Triggers: Increments after sending a CS-Paging message. Availability: per SGSN Type: Counter	Int32
bssgp-ps-paging-msg-sent	Description: This proprietary statistic indicates the total number of BSSGP packet switched (PS) paging messages sent. Triggers: Increments after sending a PS-Paging message. Availability: per SGSN Type: Counter	Int32
bssgp-ra-cap-update-msg-rcvd	Description: This proprietary statistic indicates the total number of BSSGP routing area (RA) capability update messages received. Triggers: Increments upon receiving a RA-Capability-Update message. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
bssgp-ra-cap-update-ack-msg-sent	Description: This proprietary statistic indicates the total number of BSSGP routing area (RA) capability update messages sent. Triggers: Increments after sending a RA-Capability-Update-Ack message. Availability: per SGSN Type: Counter	Int32
bssgp-radio-status-msg-sent	This statistic has been deprecated.	
bssgp-radio-status-msg-rcvd	Description: This proprietary statistic indicates the total number of BSSGP radio status messages received. Triggers: Increments upon receiving a Radio-Status message. Availability: per SGSN Type: Counter	Int32
bssgp-suspend-msg-rcvd	Description: This proprietary statistic indicates the total number of BSSGP SUSPEND messages received. Triggers: Increments upon receiving a BSSGP-Suspend message. Availability: per SGSN Type: Counter	Int32
bssgp-suspend-ack-msg-sent	Description: This proprietary statistic indicates the total number of BSSGP SUSPEND Acks sent. Triggers: Increments after sending a BSSGP-Suspend-Ack message. Availability: per SGSN Type: Counter	Int32
bssgp-suspend-nack-msg-sent	Description: This proprietary statistic indicates the total number of BSSGP SUSPEND NAKs sent. Triggers: Increments after sending a BSSGP-Suspend-Nak message. Availability: per SGSN Type: Counter	Int32
bssgp-resume-msg-rcvd	Description: This proprietary statistic indicates the total number of BSSGP RESUME messages received. Triggers: Increments upon receiving a BSSGP-Resume message. Availability: per SGSN Type: Counter	Int32
bssgp-resume-ack-msg-sent	Description: This proprietary statistic indicates the total number of BSSGP RESUME Acks sent. Triggers: Increments after sending a BSSGP-Resume-Ack message. Availability: per SGSN Type: Counter	Int32
bssgp-resume-nack-msg-sent	Description: This proprietary statistic indicates the total number of BSSGP RESUME NAKs sent. Triggers: Increments after sending a BSSGP-Resume-Nak message. Availability: per SGSN Type: Counter	Int32

Variables	Description	Data Type
bssgp-downlink-unitdata-sent	Description: This proprietary statistic indicates the total number of BSSGP unit data sent in downlink direction (towards MS). Triggers: Increments after sending a BSSGP DL-UNITDATA message. Availability: per SGSN Type: Counter	Int32
bssgp-uplink-unitdata-rcvd	Description: This proprietary statistic indicates the total number of BSSGP unit data received in uplink direction (towards network). Triggers: Increments upon receiving a BSSGP UL-UNITDATA message. Availability: per SGSN Type: Counter	Int32
bssgp-llc-pdu-discard-msg-rcvd	Description: This proprietary statistic indicates the total number of LLC PDU discard messages received. Triggers: Increments upon receiving a LLC-Discard message. Availability: per SGSN Type: Counter	Int32
bssgp-pkt-drop-flow-ctrl-queue-full	Description: This proprietary statistic indicates the total number of BSSGP packets dropped because the flow control buffer was full. Triggers: Increments after dropping a downlink packet in the BSSGP layer due to a full flow control queue. Availability: per SGSN Type: Counter	Int32
bssgp-downlink-pkt-drop	Description: This proprietary statistic indicates the total number of BSSGP packets dropped in downlink direction. Triggers: Increments after dropping a downlink packet in the BSSGP layer. Availability: per GPRS service Type: Counter	Int32
bssgp-ms-flow-ctrl-msg-rcvd	Description: This proprietary statistic indicates the total number of MS flow control messages received. Triggers: Increments upon receiving a MS-Flow-Control message. Availability: per GPRS service Type: Counter	Int32
bssgp-ms-flow-ctrl-ack-msg-sent	Description: This proprietary statistic indicates the total number of MS flow control ACK messages sent. Triggers: Increments after sending a MS-Flow-Control-Ack message. Availability: per GPRS service Type: Counter	Int32
bssgp-bvc-unknown-ms-status-msg-rcvd	Description: This proprietary statistic indicates the total number of BSSGP-STATUS messages received. Triggers: Increments upon receiving a BSSGP-STATUS message as a response for any BSSGP message which contains an MS identity that is not known at the BSS. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
bssgp-bvc-unknown-ms-status-msg-sent	Description: This proprietary statistic indicates the total number of BSSGP-STATUS messages sent. Triggers: Increments after sending a BSSGP-STATUS message as a response for the received BSSGP message if the MS identity is not known by the SGSN. Availability: per GPRS service Type: Counter	Int32
sndcp-xid-req-ms-init	Description: This proprietary statistic indicates the total number of MS initiated eXchange Identification (XID) indicators received. Triggers: Increments upon receiving a XID request from a MS with Layer 3/SNDCP XID parameters. Availability: per GPRS service Type: Counter	Int64*
sndcp-xid-ind-sgsn-init	Description: This proprietary statistic indicates the total number of SGSN initiated eXchange Identification (XID) indicators sent. Triggers: Increments after sending a XID request from the SGSN with Layer 3/SNDCP XID parameters. Availability: per GPRS service Type: Counter	Int64*
sndcp-npdus-ack-rcvd-ms	Description: This proprietary statistic indicates the total number of SNDCP network PDUs in LLC Acknowledged mode received from MS. Triggers: Increments upon receiving SNDCP network PDUs in LLC Acknowledged mode from the MS. Availability: per GPRS service Type: Counter	Int64*
sndcp-npdus-ack-sent-ms	Description: This proprietary statistic indicates the total number of SNDCP network PDUs in LLC Acknowledged mode sent to MS. Triggers: Increments after sending SNDCP network PDUs in LLC Acknowledged mode to the MS. Availability: per GPRS service Type: Counter	Int64*
sndcp-npdus-uack-rcvd-ms	Description: This proprietary statistic indicates the total number of SNDCP network PDUs in UnLLC Acknowledged mode received from MS. Triggers: Increments upon receiving SNDCP network PDUs in Un-LLC Acknowledged mode from the MS. Availability: per GPRS service Type: Counter	Int64*
sndcp-npdus-uack-sent-ms	Description: This proprietary statistic indicates the total number of SNDCP network PDUs in UnLLC Acknowledged mode sent to MS. Triggers: Increments after sending SNDCP network PDUs in un-LLC Acknowledged mode to the MS. Availability: per GPRS service Type: Counter	Int64*

Variables	Description	Data Type
snhcp-bytes-ack-rcvd-ms	Description: This proprietary statistic indicates the total number of SNDCP bytes received from MS for all subscribers at SNDCP layer using LLC Acknowledged mode of LLC operation. Triggers: Increments after the uplink data packet has passed SNDCP validations as mentioned in sections 6.7 and 6.9 of SNDCP TS 44.065. Availability: per GPRS service, per Routing Area Type: Counter	Int64*
snhcp-bytes-ack-sent-ms	Description: This proprietary statistic indicates the total number of SNDCP bytes sent to MS for all subscribers at SNDCP layer using LLC Acknowledged mode of LLC operation. Triggers: Increments after the uplink data packet has passed SNDCP validations as mentioned in sections 6.7 and 6.9 of SNDCP TS 44.065. Availability: per GPRS service, per Routing Area Type: Counter	Int64*
snhcp-bytes-uack-rcvd-ms	Description: This proprietary statistic indicates the total number of SNDCP bytes received from MS for all subscribers at SNDCP layer using LLC Un-acknowledged mode of LLC operation. Triggers: Increments after the uplink data packet has passed SNDCP validations as mentioned in sections 6.7 and 6.9 of SNDCP TS 44.065. Availability: per GPRS service, per Routing Area Type: Counter	Int64*
snhcp-bytes-uack-sent-ms	Description: This proprietary statistic indicates the total number of SNDCP bytes sent to MS for all subscribers at SNDCP layer using LLC Un-acknowledged mode of LLC operation. Triggers: Increments after the uplink data packet has passed SNDCP validations as mentioned in sections 6.7 and 6.9 of SNDCP TS 44.065. Availability: per GPRS service, per Routing Area Type: Counter	Int64*
snhcp-pdu-drop-rcvd-from-llc	Description: This proprietary statistic indicates the total number of SNDCP PDUs dropped when received from LLC due to invalid parameter or state. Triggers: Increments upon receiving a SNDCP PDU from LLC for a SAPI which is not in a bound state. Availability: per GPRS service Type: Counter	Int64*
snhcp-inval-ref-num-rcvd-from-llc	Description: This proprietary statistic indicates the total number of SNDCP PDUs dropped due to invalid reference number received from LLC. Triggers: Increments upon receiving an invalid reference number from LLC for the SAPI in which the SNDCP PDU is received. Availability: per GPRS service Type: Counter	Int64*
snhcp-npdu-sent-sgsn-irau	Description: This proprietary statistic indicates the total number of SNDCP network PDUs sent/transferred to other SGSNs during inter-SGSN routing area update (RAU). Triggers: Increments after sending SNDCP network PDUs to a peer SGSN while Inter-SGSN RAU is in progress. Availability: per GPRS service Type: Counter	Int64*

Variables	Description	Data Type
sndcp-npdu-rcvd-sgsn-irau	Description: This proprietary statistic indicates the total number of SNDCP network PDUs received from other SGSNs during inter-SGSN routing area update (RAU). Triggers: Increments upon receiving SNDCP network PDUs from a peer SGSN while Inter-SGSN RAU is in progress. Availability: per GPRS service Type: Counter	Int64*
llc-data-req-rx	Description: This proprietary statistic indicates the total number of LLC data requests received from the MS. Triggers: Increments upon receiving a downlink packet from SNDCP. Availability: per GPRS service Type: Counter	Int64*
llc-data-cfm-tx	Description: This proprietary statistic indicates the total number of LLC data requests confirmation sent to the MS. Triggers: Increments after sending a confirmation to SNDCP regarding a downlink packet. Availability: per GPRS service Type: Counter	Int64*
llc-data-ind-tx	Description: This proprietary statistic indicates the total number of LLC data indications sent to SNDCP layer. Triggers: Increments after sending an uplink packet to SNDCP. Availability: per GPRS service Type: Counter	Int64*
llc-data-sent-ind-tx	This statistic no longer pegs values and should not be used.	Int64
llc-unit-data-req-rx	Description: This proprietary statistic indicates the total number of LLC unit data requests received from the MS. Triggers: Increments upon receiving an Un-LLC Acknowledged mode packet from SNDCP. Availability: per GPRS service Type: Counter	Int64*
llc-unit-data-ind-tx	Description: This proprietary statistic indicates the total number of LLC unit data indications sent to the MS. Triggers: Increments after sending an Un-LLC Acknowledged mode packet to SNDCP. Availability: per GPRS service Type: Counter	Int64*
llc-discarded-frames-rx	Description: This proprietary statistic indicates the total number of frames received from the MS that are discarded at the LLC layer. Triggers: Increments after discarding a packet received from BSSGP. Availability: per GPRS service Type: Counter	Int64*
llc-discarded-frames-tx	This statistic no longer pegs values and should not be used.	Int64
llc-error-frames-rx	Description: This proprietary statistic indicates the total number of LLC error frames received from the MS. Triggers: Increments upon receiving a packet with an error from BSSGP. Availability: per GPRS service Type: Counter	Int64*

Variables	Description	Data Type
llc-unrecog-frames-rx	Description: This proprietary statistic indicates the total number of LLC unrecognized frames received from the MS. Triggers: Increments upon receiving a LLC message which contains an Invalid Frame format or a format other than the defined frame formats. Availability: per GPRS service Type: Counter	Int64*
llc-xid-collisions	Description: This proprietary statistic indicates the total number of LLC exchange identifier (XID) request collisions. Triggers: Increments upon receiving a XID while waiting for DISC/SABME. Availability: per GPRS service Type: Counter	Int64*
llc-ciphering-errors	Description: This proprietary statistic indicates the total number of LLC ciphering errors. Triggers: Increments upon a deciphering failure on the received LLC frame or on a ciphering failure while building the LLC frame. Availability: per GPRS service Type: Counter	Int64*
llc-fcs-errors	Description: This proprietary statistic indicates the total number of LLC frame check sequence errors. Triggers: Increments upon a Frame Check Sequence failure while validating FCS on the received LLC frame or on a FCS failure while building the LLC frame. Availability: per GPRS service Type: Counter	Int64*
llc-frame-stats-octets-rxvd	Description: This proprietary statistic indicates the total number of bytes of LLC frames received from an MS. This value includes all LLC messages (data+ gmm messages + other LLC messages). This stat value be compared with similar counts for other layers to check if any packets have been dropped. Triggers: Increments when the LLC layer receives a packet (can be UI frame, U frame, S frame or U frame) from lower BSSGP layer. Availability: per GRPS service Type: Counter	Int64*
llc-frame-stats-octets-sent	Description: This proprietary statistic indicates the total number of bytes sent from the LLC layer to an MS from the SGSN. This value includes all LLC messages (data+ gmm messages + other LLC messages). This stat value be compared with similar counts for other layers to check if any packets have been dropped. Triggers: Increments when the LLC layer sends a packet (can be UI frame, U frame, S frame or U frame) to the lower BSSGP layer. Availability: per GPRS service Type: Counter	Int64*

Variables	Description	Data Type
llc-frame-stats-unack-frames-rcvd	Description: This proprietary statistic indicates the total number of unacknowledged UI frames received at the LLC layer from an MS. This value be compared with the packet count in gmm and sndcp to check if there are any packets dropped in the LLC layer. Triggers: Increments when the LLC layer receives a UI frame in unacknowledged mode from the lower BSSGP layer. Availability: per GPRS service Type: Counter	Int64*
llc-frame-stats-unack-frames-sent	Description: This proprietary statistic indicates the total number of unacknowledged UI frames sent from the LLC to an MS. This value can be compared with the packet count in gmm and sndcp to check if there are any packets dropped in the LLC layer. Triggers: Increments when the LLC layer sends a UI frame in unacknowledged mode to the lower BSSGP layer. Availability: per GPRS service Type: Counter	Int64*
llc-frame-stats-ui-rx	Description: This proprietary statistic indicates the total number of LLC frames with unnumbered information received from the MS. Triggers: Increments upon receiving a LLC message from the MS which contains an Unnumbered Information (UI Frame). Availability: per GPRS service Type: Counter	Int64*
llc-frame-stats-ui-tx	Description: This proprietary statistic indicates the total number of LLC frames with unnumbered information sent to the MS. This is a counter type of statistic. Triggers: Increments after sending a LLC message to the MS which contains an Unnumbered Information (UI Frame). Availability: per GPRS service Type: Counter	Int64*
llc-frame-stats-ui-ciph-rx	Description: This proprietary statistic indicates the total number of LLC frames with ciphered unnumbered information received from the MS. This is a counter type of statistic. Triggers: Increments upon receiving a LLC message from the MS which contains a Ciphered Unnumbered Information (UI Frame). Availability: per GPRS service Type: Counter	Int64*
llc-frame-stats-ui-ciph-tx	Description: This proprietary statistic indicates the total number of LLC frames with ciphered unnumbered information sent to the MS. Triggers: Increments after sending a LLC message to the MS which contains a Ciphered Unnumbered Information (UI Frame). Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea1-ciph-data-frames-rx	Description: Indicates the total number of GEA1 ciphered data frames received at LLC layer; where the data frames include GMM, SMS, and SND CP SAPI i.e 1, 7, 3, 5, 9 or 11. Triggers: Increments when receiving data frame ciphered with the GPRS GEA1 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*

Variables	Description	Data Type
llc-frame-stats-ui-gea1-ciph-data-frames-tx	Description: Indicates the total number of GEA1 ciphered data frames transmitted from the LLC layer; where the data frames include GMM, SMS, and SNDCP SAPI i.e., 1, 7, 3, 5, 9 or 11. Triggers: Increments when transmitting data frame ciphered with the GPRS GEA1 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea1-ciph-data-octets-rx	Description: Indicates the total number of GEA1 ciphered data bytes received at the LLC layer. Triggers: Increments when receiving a data octet ciphered with GPRS GEA1 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea1-ciph-data-octets-tx	Description: Indicates the total number of GEA1 ciphered data bytes transmitted from the LLC layer. Triggers: Increments when transmitting a data octet ciphered with GPRS GEA1 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea2-ciph-data-frames-rx	Description: Indicates the total number of GEA2 ciphered data frames received at LLC layer; where the data frames include GMM, SMS, and SNDCP SAPI i.e., 1, 7, 3, 5, 9 or 11. Triggers: Increments when receiving data frame ciphered with the GPRS GEA2 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea2-ciph-data-frames-tx	Description: Indicates the total number of GEA2 ciphered data frames transmitted from the LLC layer; where the data frames include GMM, SMS, and SNDCP SAPI i.e., 1, 7, 3, 5, 9 or 11. Triggers: Increments when transmitting data frame ciphered with the GPRS GEA2 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea2-ciph-data-octets-rx	Description: Indicates the total number of GEA2 ciphered data bytes received at the LLC layer. Triggers: Increments when receiving a data octet ciphered with GPRS GEA2 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea2-ciph-data-octets-tx	Description: Indicates the total number of GEA2 ciphered data bytes transmitted from the LLC layer. Triggers: Increments when transmitting a data octet ciphered with GPRS GEA2 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*

Variables	Description	Data Type
llc-frame-stats-ui-gea3-ciph-data-frames-rx	Description: Indicates the total number of GEA3 ciphered data frames received at LLC layer; where the data frames include GMM, SMS, and SNDCP SAPI i.e., 1, 7, 3, 5, 9 or 11. Triggers: Increments when receiving data frame ciphered with the GPRS GEA3 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea3-ciph-data-frames-tx	Description: Indicates the total number of GEA3 ciphered data frames transmitted from the LLC layer; where the data frames include GMM, SMS, and SNDCP SAPI i.e., 1, 7, 3, 5, 9 or 11. Triggers: Increments when transmitting data frame ciphered with the GPRS GEA3 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea3-ciph-data-octets-rx	Description: Indicates the total number of GEA3 ciphered data bytes received at the LLC layer, where the data frames include GMM, SMS, and SNDCP SAPI i.e., 1, 7, 3, 5, 9 or 11. Triggers: Increments when receiving a data octet ciphered with GPRS GEA3 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-gea3-ciph-data-octets-tx	Description: Indicates the total number of GEA3 ciphered data bytes transmitted from the LLC layer, where the data frames include GMM, SMS, and SNDCP SAPI i.e., 1, 7, 3, 5, 9 or 11. Triggers: Increments when transmitting a data octet ciphered with GPRS GEA3 ciphering algorithm. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-unciph-rx	Description: Total number of unciphered frames received at the LLC layer. Triggers: Increments when the incoming frame is unciphered. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-unciph-tx	Description: Total number of unciphered frames transmitted from the LLC layer. Triggers: Increments when the outgoing frame is unciphered. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-unciph-data-frames-rx	Description: Total number of unciphered data frames received at the LLC layer, where the data frames include GMM, SMS, and SNDCP SAPI i.e., 1, 7, 3, 5, 9 or 11. Triggers: Increments when the incoming data frame is unciphered. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-unciph-data-frames-tx	Description: Total number of unciphered data frames transmitted at the LLC layer, where the data frames include GMM, SMS, and SNDCP SAPI i.e., 1, 7, 3, 5, 9 or 11. Triggers: Increments when the outgoing data frame is unciphered. Availability: per GPRS service. Type: Counter	Int64*

Variables	Description	Data Type
llc-frame-stats-ui-unciph-data-octets-rx	Description: Total number of unciphered data bytes received at the LLC layer. Triggers: Increments when receiving an unciphered data octet. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-ui-unciph-data-octets-tx	Description: Total number of unciphered data bytes transmitted from the LLC layer. Triggers: Increments when transmitting an unciphered data octet. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-xid-rvcd	Description: This proprietary statistic indicates the total number of XID-reset messages received from the MS. Triggers: Increments when the LLC layer receives an XID request from the lower BSSGP layer. Availability: per GPRS service. Type: Counter	Int64*
llc-frame-stats-xid-sent	Description: This proprietary statistic indicates the total number of XID-reset messages sent to the MS. This includes responses to XIDs sent by the SGSN and XID command from the MS. This stat value can be compared with the stat value for llc-frame-stats-xid-rvcd to determine XID failures. Triggers: Increments when the LLC layer sends an XID request to the lower BSSGP layer. Availability: per GPRS service. Type: Counter	Int64*
bytes-sent-to-bsc	Description: Stat collected on the Gb interface provides the total number of bytes of data sent by a SGSN to a specific BSC (NSEI). Triggers: Increments by the number of bytes of data in the data packet whenever a data packet is sent in the downlink direction from the SGSN to a subscriber served by the particular BSC (NSEI). Availability: per NSEI Type: Counter	Int64
packets-sent-to-bsc	Description: Stat collected on the Gb interface provides the total number of data packets a SGSN sent to a specific BSC (NSEI). Triggers: Increments whenever a data packet is sent in the downlink direction from the GGSN to a subscriber served by the particular BSC. Availability: per NSEI Type: Counter	Int64
bytes-rvcd-from-bsc	Description: Stat collected on the Gb interface provides the total number of bytes of data received by a SGSN from a specific BSC (NSEI). Triggers: Increments by the number of bytes of data in the data packet whenever a data packet is sent in the uplink direction to the SGSN from a subscriber served by the particular BSC (NSEI). Availability: per BSC Type: Counter	Int64
packets-rvcd-from-bsc	Description: Stat collected on the Gb interface provides the total number of data packets the SGSN received from a specific BSC (NSEI). Triggers: Increments whenever a data packet is sent in the uplink direction to the SGSN from a subscriber served by the particular BSC (NSEI). Availability: per NSEI Type: Counter	Int64

Variables	Description	Data Type
gprs-num-sub-gea0-capable	Description: This proprietary statistic indicates the total number of currently attached GPRS subscribers whose MS network capability supports GEA0 (no ciphering). Availability: per SGSN Type: Gauge	Int32
gprs-num-sub-gea1-capable	Description: This proprietary statistic indicates the total number of currently attached GPRS subscribers whose MS network capability supports GEA1 encryption. Availability: per SGSN Type: Gauge	Int32
gprs-num-sub-gea2-capable	Description: This proprietary statistic indicates the total number of currently attached GPRS subscribers whose MS network capability supports GEA2 encryption. Availability: per SGSN Type: Gauge	Int32
gprs-num-sub-gea3-capable	Description: This proprietary statistic indicates the total number of currently attached GPRS subscribers whose MS network capability supports GEA3 encryption. Availability: per SGSN Type: Gauge	Int32
gprs-num-sub-gea0-negotiated	Description: This proprietary statistic indicates the total number of currently attached GPRS subscribers who have negotiated, with the SGSN during authentication and ciphering request, to use GEA0 (no ciphering). Availability: per SGSN Type: Gauge	Int32
gprs-num-sub-gea1-negotiated	Description: This proprietary statistic indicates the total number of currently attached GPRS subscribers who have negotiated, with the SGSN during authentication and ciphering request, to use GEA1 encryption. Availability: per SGSN Type: Gauge	Int32
gprs-num-sub-gea2-negotiated	Description: This proprietary statistic indicates the total number of currently attached GPRS subscribers who have negotiated, with the SGSN during authentication and ciphering request, to use GEA2 encryption. Availability: per SGSN Type: Gauge	Int32
gprs-num-sub-gea3-negotiated	Description: This proprietary statistic indicates the total number of currently attached GPRS subscribers who have negotiated, with the SGSN during authentication and ciphering request, to use GEA3 encryption. Availability: per SGSN Type: Gauge	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 25

GTP-C Schema Statistics

The GTP-C schema provides operational statistics that can be used for monitoring and troubleshooting the following products: GGSN, P-GW, S-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 25. Bulk Statistic Variables in the GTP-C Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the service. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the service. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	The name of the service for which the statistics are displayed. This is a key variable. Type: Information	String
setup-current	The total number of current sessions setup Type: Gauge	Int32
current-ip	The total number of current IPv4 Sessions Type: Gauge	Int32
current-ppp	The total number of current PPP sessions Type: Gauge	Int32
current-ipv6	The total number of current IPv6 Sessions Type: Gauge	Int32
current-ipv4v6	The total number of current IPv4v6 Sessions Type: Gauge	Int32
current-ntwkinitd	The total number of current Network initiated Sessions Type: Gauge	Int32
setup-total	The total number of PDP contexts setup. Type: Counter	Int32
setup-ip	The total number of IP PDP contexts setup. Type: Counter	Int32
setup-ppp	The total number of PPP PDP contexts setup. Type: Counter	Int32
setup-ipv6	The total number of IPv6 sessions Type: Counter	Int32
setup-ipv4v6	The total number of IPv4v6 sessions Type: Counter	Int32
setup-sgsn	The total number of SGSN initiated sessions Type: Counter	Int32
setup-ggsn	The total number of GGSN initiated sessions Type: Counter	Int32
released-total	The total number of PDP contexts released. Type: Counter	Int32
dyn-ipv4-attempt	The total number of IPv4 PDP contexts requesting dynamically assigned IP addresses that were attempted. Type: Counter	Int32

Variables	Description	Data Type
dyn-ipv6-attempt	The total number of IPv6 PDP contexts requesting dynamically assigned IP addresses that were attempted. Type: Counter	Int32
dyn-ipv4v6-attempt	The total number of IPv4v6 PDP contexts requesting dynamically assigned IP addresses that were attempted. Type: Counter	Int32
dyn-ipv4-success	The total number of IPv4 PDP contexts requesting dynamically assigned IP addresses that were successfully setup. Type: Counter	Int32
dyn-ipv6-success	The total number of IPv6 PDP contexts requesting dynamically assigned IP addresses that were successfully setup. Type: Counter	Int32
dyn-ipv4v6-success	The total number of IPv4v6 PDP contexts requesting dynamically assigned IP addresses that were successfully setup. Type: Counter	Int32
echo-req-rx	The total number of GTPC echo requests received. Type: Counter	Int32
echo-req-tx	The total number of GTPC echo requests transmitted. Type: Counter	Int32
gtpu-echo-req-rx	The total number of GTPU echo requests received. Type: Counter	Int32
gtpu-echo-req-tx	The total number of GTPU echo requests transmitted. Type: Counter	Int32
echo-rsp-tx	The total number of GTPC echo responses transmitted. Type: Counter	Int32
echo-rsp-rx	The total number of GTPC echo responses received. Type: Counter	Int32
gtpu-echo-rsp-tx	The total number of GTPU echo responses transmitted. Type: Counter	Int32
gtpu-echo-rsp-rx	The total number of GTPU echo responses received. Type: Counter	Int32
cpc-total	The total number of Create PDP Context Request messages received. This is the sum of GTPC v0 and GTP v1 messages. Type: Counter	Int32
cpc-v0	The total number of Create PDP Context Request messages received that used GTPC version 0. Type: Counter	Int32
cpc-v1	The total number of Create PDP Context Request messages received that used GTPC version 1. Type: Counter	Int32

Variables	Description	Data Type
cpc-sec	The total number of Activate Secondary PDP Context Request received. Type: Counter	Int32
cpc-retrans	The total number of re-transmitted Create PDP Context Request messages received from the SGSN for either the primary or secondary PDP contexts. Type: Counter	Int32
cpc-accept	The total number of Create PDP Context Response messages transmitted containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
cpc-deny	The total number of “reject” Create PDP Context Response messages transmitted. Type: Counter	Int32
cpc-discard	The total number of Create PDP Context Request messages received from the SGSN(s) that were discarded. Type: Counter	Int32
upc-rx	The total number of Update PDP Context Request messages received from the SGSN(s). Type: Counter	Int32
upc-rx-accept	The total number of Update PDP Context Response messages transmitted to the SGSN(s) containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
upc-rx-deny	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s). Type: Counter	Int32
upc-rx-discard	The total number of Update PDP Context Request messages received from SGSN(s) that were discarded Type: Counter	Int32
upc-tx	The total number of Update PDP Context Request messages transmitted to the SGSN(s). Type: Counter	Int32
upc-tx-accept	The total number of Update PDP Context Response messages sent to the SGSN(s) containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
upc-tx-deny	The total number of “reject” Update PDP Context Response messages sent to the SGSN(s). Type: Counter	Int32
upc-tx-dt-upd	The total number of Update PDP Context Response messages sent to SGSN(s) for direct tunnel update. Type: Counter	Int32
dpc-rx	The total number of Delete PDP Context Request messages received from the SGSN(s). Type: Counter	Int32
dpc-rx-accept	The total number of Delete PDP Context Response messages transmitted containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
dpc-rx-deny	The total number of “reject” Delete PDP Context Response messages transmitted. Type: Counter	Int32

Variables	Description	Data Type
dpc-rx-discard	The total number of Delete PDP Context Request messages received from the SGSN(s) that were discarded Type: Counter	Int32
dpc-tx	The total number of Delete PDP Context Request messages transmitted to the SGSN(s). Type: Counter	Int32
dpc-tx-accept	The total number of Delete PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
dpc-tx-deny	The total number of “reject” Delete PDP Context Response messages received from the SGSN(s). Type: Counter	Int32
cpc-aa	The total number of Create AA (anonymous access) PDP Context Request messages received. Type: Counter	Int32
cpc-aa-accept	The total number of Create AA PDP Context Response messages transmitted to the SGSN with a cause code of 128 (80H, Request accepted). Type: Counter	Int32
cpc-aa-deny	The total number of “reject” Create AA PDP Context Response messages transmitted to the SGSN(s). Type: Counter	Int32
cpc-aa-discard	The total number of Create AA PDP Context Request messages received that were discarded without transmitting a response to the SGSN(s). Type: Counter	Int32
dpc-aa-rx	The total number of Delete AA PDP Context Request messages received from the SGSN(s). Type: Counter	Int32
dpc-aa-rx-accept	The total number of Delete AA PDP Context Response messages transmitted containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
dpc-aa-rx-deny	The total number of “reject” Delete AA PDP Context Response messages transmitted to the SGSN(s). Type: Counter	Int32
dpc-aa-rx-discard	The total number of Delete PDP AA Context Request messages received from the SGSN(s) that were discarded Type: Counter	Int32
dpc-aa-tx	The total number of Delete AA PDP Context Request messages transmitted to the SGSN(s). Type: Counter	Int32
dpc-aa-tx-accept	The total number of Delete AA PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
dpc-aa-tx-deny	The total number of “reject” Delete AA PDP Context Response messages received from the SGSN(s). Type: Counter	Int32

Variables	Description	Data Type
err-ind-rx	The total number of error indication messages received from the SGSN(s). Type: Counter	Int32
err-ind-tx	The total number of error indication messages transmitted to the SGSN(s). Type: Counter	Int32
err-ind-rx-discard	The total number of error indication messages received and discarded at the SGSN(s). Type: Counter	Int32
cpc-noresource	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 199 (C7H, No resources available). Type: Counter	Int32
cpc-addr-occupied	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 211 (D3H, All dynamic PDP addresses are occupied). Type: Counter	Int32
cpc-nomem	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 212 (D4H, No memory is available). Type: Counter	Int32
cpc-missing-apn	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 219 (DBH, Missing or unknown APN). Type: Counter	Int32
cpc-unknown-pdp	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 220 (DCH, Unknown PDP address or PDP type). Type: Counter	Int32
cpc-no-apn-subscription	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent because there was no apn subscription. Type: Counter	Int32
cpc-auth-fail	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201. Type: Counter	Int32
cpc-sys-fail	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 204 (CCH, System failure). Type: Counter	Int32
cpc-sem-tft	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation). Type: Counter	Int32
cpc-syn-tft	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation). Type: Counter	Int32
cpc-sem-pktfilter	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)). Type: Counter	Int32
cpc-syn-pktfilter	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)). Type: Counter	Int32

Variables	Description	Data Type
cpc-ie-err	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect). Type: Counter	Int32
cpc-ie-missing	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing). Type: Counter	Int32
cpc-opt-ie-err	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect). Type: Counter	Int32
cpc-malformed	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (CIH, Invalid message format). Type: Counter	Int32
cpc-version	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 198 (C6H, version not supported). Type: Counter	Int32
cpc-srv-not-supp	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 200 (C8H, service not Supported). Type: Counter	Int32
disc-sgsn	The total number of sessions released by SGSN(s). Type: Counter	Int32
disc-path-fail	The total number of session releases that occurred due to path failure. Type: Counter	Int32
disc-smgr-dead	The total number of sessions released due to the termination of the session manager that was facilitating them. Type: Counter	Int32
disc-admin	The total number of sessions administratively released. Type: Counter	Int32
disc-other	The total number of sessions released due to other reasons. Type: Counter	Int32
disc-teardown	The total number of sessions disconnected normally. Type: Counter	Int32
disc-idle	The total number of sessions released due to the expiration of the idle timeout period as specified in the APN configuration. Type: Counter	Int32
disc-absolute	The total number of sessions released due to the expiration of the absolute timeout period as specified in the APN configuration. Type: Counter	Int32
disc-src-addr	The total number of sessions released due to source address violations. Type: Counter	Int32
disc-flow-add	The total number of sessions released reason due to flow addition failures. Type: Counter	Int32

Variables	Description	Data Type
disc-dhcp-renew-fail	The total number of sessions released due to failed DHCP lease renewal. Type: Counter	Int32
disc-long-durn	The total number of sessions released due to the expiration of the long duration timeout period. Type: Counter	Int32
disc-aborted	The total number of sessions released due to miscellaneous call abort conditions. Type: Counter	Int32
disc-apn-rmvd	The total number of sessions released due to the removal of an APN's configuration. Type: Counter	Int32
pdu-notif	The total number of PDU Notification Request messages transmitted to the SGSN(s). Type: Counter	Int32
pdu-notif-accept	The total number of PDU Notification Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
pdu-notif-deny	The total number of "deny" PDU Notification Response messages received from the SGSN(s). Type: Counter	Int32
pdu-notif-rej	The total number of PDU Notification Reject Request messages received from the SGSN(s). Type: Counter	Int32
pdu-notif-rej-accept	The total number of PDU Notification Reject Response messages transmitted to the SGSN(s) containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
pdu-notif-rej-deny	The total number of "deny" PDU Notification Reject Response messages transmitted to the SGSN(s). Type: Counter	Int32
pdu-notif-rej-discard	The total number of PDU Notification Reject Request messages discarded by the GGSN without any response transmitted to the SGSN(s). Type: Counter	Int32
num-dt-established	The total number of direct tunnels established between RNC and GGSN. Type: Counter	Int32
num-dt-torn-by-sgsn	The total number of established direct tunnels between SGSN and GGSN torn by SGSN. Type: Counter	Int32
num-dt-recv-err-ind	The total number of direct tunnels requests received from SGSN with error indication. Type: Counter	Int32
sri-req	The total number of Send Routing Information (SRI) for GPRS messages transmitted to the HLR(s). Type: Counter	Int32
sri-accept	The total number of Send Routing Info for GPRS Ack messages received from the HLR(s) containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32

Variables	Description	Data Type
sri-deny	The total number of “deny” Send Routing Info for GPRS Ack messages received from the HLR(s). Type: Counter	Int32
fail-rep	The total number of Failure reports transmitted to the HLR(s). Type: Counter	Int32
fail-rep-accept	The total number of Failure reports received from the HLR(s) containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
fail-rep-deny	The total number of “deny” Failure reports received from the HLR(s). Type: Counter	Int32
note-ms-gprs	The total number of Note MS GPRS Present messages received from the HLR(s). Type: Counter	Int32
note-ms-gprs-accept	The total number of Note MS GPRS Present Response messages transmitted to the HLR(s) containing a cause value of 128 (80H, Request accepted). Type: Counter	Int32
note-ms-gprs-deny	The total number of “deny” Note MS GPRS Present Response messages transmitted to the HLR(s). Type: Counter	Int32
note-ms-gprs-discard	The total number of Note MS GPRS Present messages discarded with no response transmitted to the HLR(s). Type: Counter	Int32
qosconv-bytes-in	The total number of Conversational Uplink Bytes Sent Type: Counter	Int64
qosconv-pkts-in	The total number of Conversational Uplink Pkts Sent Type: Counter	Int64
qosconv-bytes-out	The total number of Conversational Downlink Bytes Rcvd Type: Counter	Int64
qosconv-pkts-out	The total number of Conversational Downlink Pkts Rcvd Type: Counter	Int64
qosstrm-bytes-in	The total number of Streaming Uplink Bytes Sent Type: Counter	Int64
qosstrm-pkts-in	The total number of Streaming Uplink Pkts Sent Type: Counter	Int64
qosstrm-bytes-out	The total number of Streaming Downlink Bytes Rcvd Type: Counter	Int64
qosstrm-pkts-out	The total number of Streaming Downlink Pkts Rcvd Type: Counter	Int64
qosintl-bytes-in	The total number of Interactive 1 Uplink Bytes Sent Type: Counter	Int64

Variables	Description	Data Type
qosint1-pkts-in	The total number of Interactive 1 Uplink Pkts Sent Type: Counter	Int64
qosint1-bytes-out	The total number of Interactive 1 Downlink Bytes Rcvd Type: Counter	Int64
qosint1-pkts-out	The total number of Interactive 1 Downlink PktsRcvd Type: Counter	Int64
qosint2-bytes-in	The total number of Interactive 2 Uplink Bytes Sent Type: Counter	Int64
qosint2-pkts-in	The total number of Interactive 2 Uplink Pkts Sent Type: Counter	Int64
qosint2-bytes-out	The total number of Interactive 2 Downlink Bytes Rcvd Type: Counter	Int64
qosint2-pkts-out	The total number of Interactive 2 Downlink PktsRcvd Type: Counter	Int64
qosint3-bytes-in	The total number of Interactive 3 Uplink Bytes Sent Type: Counter	Int64
qosint3-pkts-in	The total number of Interactive 3 Uplink Pkts Sent Type: Counter	Int64
qosint3-bytes-out	The total number of Interactive 3 Downlink Bytes Rcvd Type: Counter	Int64
qosint3-pkts-out	The total number of Interactive 3 Downlink PktsRcvd Type: Counter	Int64
qosint-bytes-in	The total number of Interactive 1+2+3 Uplink Bytes Sent Type: Counter	Int64
qosint-pkts-in	The total number of Interactive 1+2+3 Uplink Pkts Sent Type: Counter	Int64
qosint-bytes-out	The total number of Interactive 1+2+3 Downlink Bytes Rcvd Type: Counter	Int64
qosint-pkts-out	The total number of Interactive 1+2+3 Downlink Pkts Rcvd Type: Counter	Int64
qosback-bytes-in	The total number of Background Uplink Bytes Sent Type: Counter	Int64
qosback-pkts-in	The total number of Background Uplink Pkts Sent Type: Counter	Int64
qosback-bytes-out	The total number of Background Downlink Bytes Rcvd Type: Counter	Int64
qosback-pkts-out	The total number of Background Downlink Pkts Rcvd Type: Counter	Int64

Variables	Description	Data Type
ctrl-num-bytes-in	The total number of bytes for control packets received on the Gn and/or Gp interface. Type: Counter	Int64
ctrl-num-pkts-in	The total number of control packets received on the Gn and/or Gp interface. Type: Counter	Int64
ctrl-num-bytes-out	The total number of bytes from control packets transmitted on the Gn and/or Gp interface. Type: Counter	Int64
ctrl-num-pkts-out	The total number of control packets transmitted on the Gn and/or Gp interface. Type: Counter	Int64
num-bytes-in	The total number of bytes received on the Gn and/or Gp interface. Type: Counter	Int64
num-pkts-in	The total number of packets received on the Gn and/or Gp interface. Type: Counter	Int64
num-bytes-out	The total number of bytes transmitted on the Gn and/or Gp interface. Type: Counter	Int64
num-pkts-out	The total number of packets transmitted on the Gn and/or Gp interface. Type: Counter	Int64
current-mbms-ue	The total number of current MBMS UE sessions. Type: Gauge	Int32
current-mbms-mcast	The total number of current MBMS Multicast sessions. Type: Gauge	Int32
current-mbms-bcast	The total number of current MBMS Broadcast sessions. Type: Gauge	Int32
setup-mbms-ue	The total number of MBMS UE Sessions setup. Type: Counter	Int32
setup-mbms-mcast	The total number of MBMS Multicast Sessions setup. Type: Counter	Int32
setup-mbms-bcast	The total number of MBMS Broadcast Sessions setup Type: Counter	Int32
chap-auth-attempt	The total number of CHAP Auth sessions attempted. Type: Counter	Int32
chap-auth-success	The total number of CHAP Auth sessions successful Type: Counter	Int32
chap-auth-failure	The total number of CHAP Auth sessions failed Type: Counter	Int32
pap-auth-attempt	The total number of PAP Auth sessions attempted Type: Counter	Int32
pap-auth-success	The total number of PAP Auth sessions successful Type: Counter	Int32

Variables	Description	Data Type
pap-auth-failure	The total number of PAP Auth sessions failed Type: Counter	Int32
no-auth	The total number of No-Auth sessions. Type: Counter	Int32
err-ind	Total sessions released on Error Indication Type: Counter	Int32
ctxt-replace	Total sessions released due to context replacement. Type: Counter	Int32
purge-audit	Total sessions purged due to audit failure Type: Counter	Int32
update-handoff-rej	Total sessions released due to handoff reject in UPC Type: Counter	Int32
total-handoff-fail	Total path failure due to handoff Type: Counter	Int32
sgsn-restart-cpc-req	Total path failure due to SGSN restart detected via CPC Type: Counter	Int32
sgsn-restart-upc-req	Total path failure due to SGSN restart detected via UPC Type: Counter	Int32
sgsn-restart-echo-rsp	Total path failure due to SGSN restart detected via Echo Rsp Type: Counter	Int32
gtpc-echo-timeout	Total path failure due to SGSN restart detected via GTPC echo Type: Counter	Int32
gtpu-echo-timeout	Total path failure due to SGSN restart detected via GTPU echo Type: Counter	Int32
ggsn-req-timeout	Total path failure due to GGSN request timeout. Type: Counter	Int32
version-not-sup-rx	Version not supported received Type: Counter	Int32
version-not-sup-tx	Version not supported transmitted Type: Counter	Int32
sup-ext-header-rx	Extension header supported received Type: Counter	Int32
sup-ext-header-tx	Extension header supported transmitted Type: Counter	Int32
cmc-total	The total number of Create MBMS Context request messages received. Type: Counter	Int32
cmc-initial	The total number of initial Create MBMS Context request messages received. Type: Counter	Int32

Variables	Description	Data Type
cmc-retrans	The total number of retransmitted Create MBMS Context request messages received. Type: Counter	Int32
cmc-accept	The total number of Create MBMS Context request messages accepted by the GGSN. Type: Counter	Int32
cmc-deny	The total number of Create MBMS Context request messages denied by the GGSN. Type: Counter	Int32
cmc-discard	The total number of Create MBMS Context request messages discarded by the GGSN. Type: Counter	Int32
umc-rx	The total number of Update MBMS Context request messages received. Type: Counter	Int32
umc-rx-accept	The total number of Update MBMS Context request messages accepted by the GGSN. Type: Counter	Int32
umc-rx-deny	The total number of Update MBMS Context request messages denied by the GGSN. Type: Counter	Int32
umc-rx-discard	The total number of Update MBMS Context request messages discarded by the GGSN. Type: Counter	Int32
dmc-rx	The total number of Delete MBMS Context request messages received. Type: Counter	Int32
dmc-rx-accept	The total number of Delete MBMS Context request messages accepted by the GGSN. Type: Counter	Int32
dmc-rx-deny	The total number of Delete MBMS Context request messages denied by the GGSN. Type: Counter	Int32
dmc-rx-discard	The total number of Delete MBMS Context request messages discarded by the GGSN. Type: Counter	Int32
dmc-tx	The total number of Delete MBMS Context request messages transmitted. Type: Counter	Int32
dmc-tx-accept	The total number of Delete MBMS Context request messages accepted by the SGSN. Type: Counter	Int32
dmc-tx-deny	The total number of Delete MBMS Context request messages denied by the SGSN. Type: Counter	Int32
mbms-reg-req-total	The total number of MBMS Registration Request messages received. Type: Counter	Int32
mbms-reg-req-initial	The total number of initial MBMS Registration Request messages received. Type: Counter	Int32
mbms-reg-req-retrans	The total number of retransmitted MBMS Registration Request messages received. Type: Counter	Int32
mbms-reg-req-accept	The total number of MBMS Registration Request messages accepted by the GGSN. Type: Counter	Int32

Variables	Description	Data Type
mbms-reg-req-deny	The total number of MBMS Registration Request messages denied by the GGSN. Type: Counter	Int32
mbms-reg-req-discard	The total number of MBMS Registration Request messages discarded by the GGSN. Type: Counter	Int32
mbms-ses-start-tx	The total number of MBMS Session Start Request messages transmitted. Type: Counter	Int32
mbms-ses-start-tx-accept	The total number of MBMS Session Start Request messages accepted by the SGSN. Type: Counter	Int32
mbms-ses-start-tx-deny	The total number of MBMS Session Start Request messages denied by the SGSN. Type: Counter	Int32
mbms-ses-stop-tx	The total number of MBMS Session Stop Request messages transmitted. Type: Counter	Int32
mbms-ses-stop-tx-accept	The total number of MBMS Session Stop Request messages accepted by the SGSN. Type: Counter	Int32
mbms-ses-stop-tx-deny	The total number of MBMS Session Stop Request messages denied by the SGSN. Type: Counter	Int32
mbms-dereg-rx	The total number of MBMS De-Registration Request messages received. Type: Counter	Int32
mbms-dereg-rx-accept	The total number of MBMS De-Registration Request messages accepted by the GGSN. Type: Counter	Int32
mbms-dereg-rx-deny	The total number of MBMS De-Registration Request messages denied by the GGSN. Type: Counter	Int32
mbms-dereg-rx-discard	The total number of MBMS De-Registration Request messages discarded by the GGSN. Type: Counter	Int32
mbms-dereg-tx	The total number of MBMS De-Registration Request messages transmitted. Type: Counter	Int32
mbms-dereg-tx-accept	The total number of MBMS De-Registration Request messages accepted by the SGSN. Type: Counter	Int32
mbms-dereg-tx-deny	The total number of MBMS De-Registration Request messages denied by the SGSN. Type: Counter	Int32
sess-in-preservation-mode	The total number of sessions in Preservation-Mode. This is a customer specific support only. Type: Counter	Int32
transition-to-preservation-mode	The total number of sessions in transition from Non-Preservation mode (normal mode) to Preservation-Mode. This is a customer specific support only. Type: Counter	Int32
transition-to-non-preservation-mode	The total number of sessions in transition from Preservation Mode to normal mode. This is a customer specific support only. Type: Counter	Int32

Variables	Description	Data Type
sess-in-lorc	Indicates the number of GGSN session are in LORC state and subscriber is in out of radio coverage area. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC. Type: Counter	Int32
transition-to-lorc	Indicates total number sessions in transitions state for overcharging protection support mode. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC. Type: Counter	Int32
sess-in-focs	Total number of session Free of charge service. Type: Counter	Int32
cnt-of-release-due-to-other	Total number of session release due to reasons other than listed in this table. Type: Counter	Int32
cnt-of-release-due-to-violation	Total number of session release due to service violation. Type: Counter	Int32
sess-in-odb	Indicates the total number of sessions with Operator Determined Barring enabled status. Type: Counter	Int32
cnt-of-release-due-to-violation-odb	Indicates the statistics for sessions, with Operator Determined Barring enabled status, released due to violation of ODB conditions. Type: Counter	Int32
cnt-of-release-due-to-other-odb	Indicates the total number of sessions, with Operator Determined Barring enabled status, released due to reasons not specified in this table. Type: Counter	Int32
ipca-pdp-context-tx	Total number of PDP context activation requests sent for an Initiate PDP Context Activation. Type: Counter	Int32
ipca-pdp-context-tx-accepted	Total number of PDP context activation requests sent and accepted for an Initiate PDP Context Activation. Type: Counter	Int32
ipca-pdp-context-tx-denied	Total number of PDP context activation requests denied for an Initiate PDP Context Activation. Type: Counter	Int32
ipca-reject-rx-no-resources	Total number of Initiate PDP Context Activation reject messages received due to no resource available on remote node. Type: Counter	Int32
ipca-reject-rx-no-mem-avail	Total number of Initiate PDP Context Activation reject messages received due to no memory available on remote node. Type: Counter	Int32
ipca-reject-rx-sys-failure	Total number of Initiate PDP Context Activation reject messages received due to system failure on remote node. Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
ipca-reject-rx-non-existent	Total number of Initiate PDP Context Activation reject messages received due to non-existent session/subscriber on remote node. Type: Counter	Int32
ipca-reject-rx-unsupported-service	Total number of Initiate PDP Context Activation reject messages received as service is not supported on on remote node. Type: Counter	Int32
ipca-reject-rx-invalid-msg-format	Total number of Initiate PDP Context Activation reject messages received due to invalid message format. Type: Counter	Int32
ipca-reject-rx-semantic-err-in-tft	Total number of Initiate PDP Context Activation reject messages received due to semantic error in Traffic Flow Template (TFT). Type: Counter	Int32
ipca-reject-rx-syntactic-err-in-tft	Total number of Initiate PDP Context Activation reject messages received due to syntactic error in Traffic Flow Template (TFT) Type: Counter	Int32
ipca-reject-rx-man-ie-incorrect	Total number of Initiate PDP Context Activation reject messages received due to incorrect information in mandatory information elements (IEs). Type: Counter	Int32
ipca-reject-rx-semantic-err-in-pac-filter	Total number of Initiate PDP Context Activation reject messages received due to semantic error in PAC filter. Type: Counter	Int32
ipca-reject-rx-man-ie-missing	Total number of Initiate PDP Context Activation reject messages received as mandatory information element (IE) is missing. Type: Counter	Int32
ipca-reject-rx-optional-ie-incorrect	Total number of Initiate PDP Context Activation reject messages received due to incorrect information in optional information elements (IEs). Type: Counter	Int32
ipca-reject-rx-syntactic-err-in-pac-filter	Total number of Initiate PDP Context Activation reject messages received due to syntactic error in PAC filter. Type: Counter	Int32
ipca-reject-rx-ue-not-gprs-rsp	Total number of Initiate PDP Context Activation reject messages received as UE is not capable or subscribed to GPRS service. Type: Counter	Int32
ipca-reject-rx-ue-refuses	Total number of Initiate PDP Context Activation reject messages received due to refusal from UE. Type: Counter	Int32
ipca-reject-rx-invalid-correlation-id	Total number of Initiate PDP Context Activation reject messages received due to invalid correlation identifier. Type: Counter	Int32

Variables	Description	Data Type
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 26

GTPP Schema Statistics

The GTPP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: GGSN, P-GW, SGSN

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 26. Bulk Statistic Variables in the GTPP Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the GTPP configuration. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the GTPP configuration. This is an internal reference number. This is a key variable. Type: Information	Int32
echo-req-rx	The total number of Echo Request messages received.	Int32
echo-req-tx	The total number of Echo Request messages transmitted.	Int32
echo-rsp-rx	The total number of Echo Response messages received.	Int32
echo-rsp-tx	The total number of Echo Response messages transmitted.	Int32
redir-rcvd	The total number of Redirection Request messages received.	Int32
redir-rsp	The total number of Redirection Response messages transmitted.	Int32
node-alive	The total number of Node Alive Request messages received.	Int32
node-alive-rsp	The total number of Node Alive Response messages transmitted.	Int32
data-rec-trans	The total number of Data Record Transfer Request messages transmitted to the CGF(s).	Int32
dup-data-rec-trans	The total number of data records transmitted marked as potential duplicates.	Int32
send-data-rec	The total number of Data Record Transfer Request messages transmitted containing a Packet Transfer Command information element of 1 (Send Data Record Packet).	Int32
rel-data-rec	The total number of Data Record Transfer Request messages transmitted containing a Packet Transfer Command information element of 4 (Release Data Record Packet).	Int32
cancel-data-rec	The total number of Data Record Transfer Request messages transmitted containing a Packet Transfer Command information element of 3 (Cancel Data Record Packet).	Int32
data-rec-trans-rsp	The total number of Data Record Transfer Response messages received from the CGF(s).	Int32
delete-node	The total number of Delete Node Address Request messages sent to the CGF(s).	Int32
node-addr	The total number of Set Node Address Request messages sent to the CGF(s).	Int32
req-accept	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 128 (80H, Request accepted).	Int32
req-not-fulfil	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 255 (FFH, Request not fulfilled).	Int32
req-malform	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 193 (C1H, Invalid message format).	Int32
version-not-sup	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 198 (C6, Version not supported).	Int32
serv-not-sup	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 200 (C8H, Service not supported).	Int32
mand-ie-err	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 201 (C9H, Mandatory IE incorrect).	Int32

Variables	Description	Data Type
mand-ie-miss	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 202 (CAH, Mandatory IE missing).	Int32
opt-ie-err	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 203 (CBH, Optional IE incorrect).	Int32
dup-already-fulfil	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 252 (FCH, Request related to possibly duplicated packets already fulfilled).	Int32
already-fulfil	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 253 (FDH, Request already fulfilled).	Int32
no-resource	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 199 (C7H, No resources available).	Int32
sys-fail	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 204 (CCH, System failure).	Int32
cdr-dec-error	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 177 (B1H, CDR Decoding Error).	Int32
seq-no-incorrect	The total number of Data Record Transfer Response messages received from the CGF(s) containing a cause information element of 254 (FEH, Incorrect Seq No).	Int32
unknown-cause	The total number of Data Record Transfer Response messages received from the CGF with Unknown Cause Code.	Int32
normal-close	The total number of CDRs sent containing a Cause for Record Closing information element of 0 (normal release).	Int32
abnormal-close	The total number of CDRs sent containing a Cause for Record Closing information element of 4 (abnormal termination).	Int32
vol-limit-close	The total number of CDRs sent containing a Cause for Record Closing information element of 16 (10H, volume limit).	Int32
time-limit-close	The total number of CDRs sent containing a Cause for Record Closing information element of 17 (11H, time limit).	Int32
open-req	The total number of Start-Accounting Request messages received.	Int32
aaa-acct-arch	The total number of requests currently archived by the system's AAA subsystem. Type: Counter	Int32
rdir-sys-fail	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 59 (3BH, System failure).	Int32
rdir-txbuf-full	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 60 (3CH, The transmit buffers are becoming full).	Int32
rdir-rxbuf-full	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 61 (3DH, The receive buffers are becoming full).	Int32
other-node-dn	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 62 (3EH, Another node is about to go down).	Int32
self-node-dn	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 63 (3FH, This node is about to go down).	Int32

Variables	Description	Data Type
rdir-no-res	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 199 (C7H, No resources available).	Int32
rdir-serv-no	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 200 (C8H, Service not supported).	Int32
rdir-version-not-supp	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 198 (C6H, Version not supported).	Int32
rdir-mand-ie-miss	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 202 (CAH, Mandatory IE missing).	Int32
rdir-mand-ie-err	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 201 (C9H, Mandatory IE incorrect).	Int32
rdir-opt-ie-err	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 203 (CBH, Optional IE incorrect).	Int32
rdir-malformed	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 193 (C1H, Invalid message format).	Int32
rdir-rsp-sys-fail	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 204 (CCH, System failure).	Int32
mgmt-int-close	indicates that the CDR is generated with cause for record closing as management intervention. e.g when the user does the “clear sub” or “gtp interm now”.	Int32
sgsn-chng-close	This stat is used to indicate that the CDR is generated at the OLD sgsn with "causeForRecClosing" as SGSN change. This will happen during ISRAU (Inter SGSN Routing Area Update) scenario wherein the call in old SGSN is transferred to new SGSN and the CDR is generated at the old SGSN indicating that MM context/PDP context is released with causeForRecClosing as SGSN Change. This is applicable only for SGSN.	Int32
max-chng-close	This indicates that the CDR is released because the container changes are more than the configured value. For example, in SGSN for QOS or tariff time changes a container is added. By default, max change is set to 4. If 4 containers are added then the CDR is released with causeForRecClosing as max change condition.	Int32
rat-chng-close	This indicates that the partial CDR is released at the GGSN due to the RAT (Radio Access Technology) change. This will happen whenever the user moves from GPRS to UMTS and vice versa. This is applicable only for G-CDR.	Int32
ms-tz-chng-close	This indicates that the partial CDR is released at the GGSN due to the MS Time zone change. This is applicable only for G-CDR.	Int32
list-down-stream-chng-close	The total number of CDRs sent containing a Cause for Record Closing information element of 59 (List Of Downstream Node Change).	Int32
focs-close	Indicates the total number of FOCS enabled sessions closed due to ACL rule violation received for FOCS and/or ODB.	Int32
inactivity-close	Indicates the total number of FOCS enabled sessions closed due to inactivity timeout.	Int32
total-gcdr-xmit	This indicates the total number of G-CDRs transmitted to the mediation system.	Int32

Variables	Description	Data Type
total-scdr-xmit	This indicates the total number of S-CDRs transmitted to the mediation system.	Int32
total-mcdr-xmit	This indicates the total number of M-CDRs transmitted to the mediation system.	Int32
total-smbmscdr-xmit	The total number of S-MB-CDR transmitted between SGSN and MBMS service.	Int32
total-gmbcdr-xmit	The total number of G-MB-CDR transmitted between GGSN and MBMS service.	Int32
total-gcdr-rexmit	This indicates the total number of G-CDRs re-transmitted to the mediation system. This will happen whenever SGSN/GGSN is not getting the response from the mediation server in a stipulated period of time.	Int32
total-scdr-rexmit	This indicates the total number of S-CDRs re-transmitted to the mediation system. This will happen whenever SGSN/GGSN is not getting the response from the mediation server in a stipulated period of time.	Int32
total-mcdr-rexmit	This indicates the total number of M-CDRs re-transmitted to the mediation system. This will happen whenever SGSN/GGSN is not getting the response from the mediation server in a stipulated period of time.	Int32
total-smbmscdr-rexmit	The total number of S-MB-CDR retransmitted between SGSN and MBMS service.	Int32
total-gmbcdr-rexmit	The total number of G-MB-CDRs retransmitted between GGSN and MBMS service.	Int32
total-gcdr-accept	This indicates the total number of G-CDRs successfully sent to the mediation server for which the SGSN/GGSN received the positive response.	Int32
total-scdr-accept	This indicates the total number of S-CDRs successfully sent to the mediation server for which the SGSN/GGSN received the positive response.	Int32
total-mcdr-accept	This indicates the total number of M-CDRs successfully sent to the mediation server for which the SGSN/GGSN received the positive response.	Int32
total-gmbcdr-accept	The total number of G-MB-CDR accepted between GGSN and MBMS service.	Int32
total-gcdr-fail	This indicates the total number of G-CDRs transmission failures.	Int32
total-scdr-fail	This indicates the total number of S-CDRs transmission failures.	Int32
total-mcdr-fail	This indicates the total number of M-CDRs transmission failures.	Int32
total-gmbcdr-fail	The total number of G-MB-CDR failed between GGSN and MBMS service.	Int32
cc-char-hot	This indicates the CDR released with charging characteristics set as Hot Billing.	Int32
cc-char-normal	This indicates the CDR released with charging characteristics set as Normal Billing.	Int32

Variables	Description	Data Type
cc-char-prepaid	This indicates the CDR released with charging characteristics set as Prepaid Billing.	Int32
cc-char-flat	This indicates the CDR released with charging characteristics set as Flat Billing.	Int32
cc-char-unknown	This indicates the CDR released with charging characteristics set as Unknow charging characteristics.	Int32
data-rec-ret-send	The total number of Data Record Transfer Request messages retried containing a Packet Transfer Command information element of 1 (Send Data Record Packet).	Int32
data-rec-ret-poss-dup	The total number of data records retried marked as potential duplicates with IE of 2. (Send Possibly Duplicate Data Record)	Int32
data-rec-ret-cancel	The total number of Data Record Transfer Request messages retried containing a Packet Transfer Command information element of 3 (Cancel Data Record Packet).	Int32
data-rec-ret-rel	The total number of Data Record Transfer Request messages retried containing a Packet Transfer Command information element of 4 (Release Data Record Packet).	Int32
data-rec-ret-emp	The total number of empty Data Record Transfer Request messages retried containing a Packet Transfer Command information element of 1 (Send Data Record Packet).	Int32
data-rec-success-send	The total number of successful Data Record Transfer Response messages for Send Data Record Packet Transfer command.	Int32
data-rec-success-poss-dup	The total number of Successful Data Record Transfer Response messages for Send Poss Dup Data Record Packet Transfer command.	Int32
data-rec-success-cancel	The total number of Successful Data Record Transfer Response messages for Cancel Data Record Packet Transfer command.	Int32
data-rec-success-rel	The total number of Successful Data Record Transfer Response messages for Release Data Record Packet Transfer command.	Int32
data-rec-success-emp	The total number of Successful Data Record Transfer Response messages for Empty Send Data Record Packet Transfer command.	Int32
invalid-msg-seq-num	The total number of requests with invalid sequence number.	Int32
invalid-msg-unknown-cgf	The total number of requests with an unknown CGF.	Int32
invalid-msg-unknown-msg	The total number of requests with an unknown message.	Int32
gss-echo-req	The total echo request from GSS.	Int32
gss-echo-rsp	The total echo request response to GSS.	Int32
gss-gtpp-req	The total GTPP request sent to GSS.	Int32
gss-gtpp-req-ret	The total GTPP request retried to GSS.	Int32
gss-gtpp-rsp	The total successful GTPP request response.	Int32

Variables	Description	Data Type
gss-gtpp-rsp-failed	The total GTPP request response failed.	Int32
gss-gcdr-req	The total GCDR request sent.	Int32
gss-gcdr-req-ret	The total GCDR request retried.	Int32
gss-gcdr-rsp	The total successful GCDR request response.	Int32
gss-gcdr-rsp-failed	The total GCDR request response failed.	Int32
gss-aaaproxy-rec-req	The total AAA proxy recover request sent.	Int32
gss-aaaproxy-rec-ret	The total AAA proxy recover request retried.	Int32
gss-aaaproxy-rec-rsp	The total successful AAA proxy recover request response.	Int32
gss-aaaproxy-rec-rsp-failed	The total AAA proxy recover request response failed.	Int32
gss-aaamgr-rec-req	The total AAA MGR recover request sent.	Int32
gss-aaamgr-rec-ret	The total AAA MGR recover request retried.	Int32
gss-aaamgr-rec-rsp	The total successful AAA MGR recover request response.	Int32
gss-aaamgr-rec-rsp-failed	The total AAA MGR recover request response failed.	Int32
gss-update-cgf-req	The total CGF update request sent.	Int32
gss-update-cgf-req-ret	The total CGF update request retried.	Int32
gss-update-cgf-rsp	The total successful CGF update request response.	Int32
gss-update-cfg-rsp-failed	The total CGF update request response failed.	Int32
gss-clear-db-req	The total database clear request sent.	Int32
gss-clear-db-req-ret	The total database clear request retried.	Int32
gss-clear-db-rsp	The total successful database clear request response.	Int32

Variables	Description	Data Type
gss-clear-db-rsp-failed	The total database clear request response failed.	Int32
gss-update-req	The total update request received.	Int32
gss-invalid-req-rcvd	The total invalid request received from.	Int32
gss-cdr-loss	The total number of CDRs lost due to failure of remote CDR file streaming.	Int32
gss-cdr-loss-traps	The total number of traps generated for loss of CDRs due to failure of remote CDR file streaming.	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 27

GTP-U Schema Statistics

The GTP-U schema provides operational statistics that can be used for monitoring and troubleshooting the following products: GGSN, HNB-GW, P-GW, S-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 27. Bulk Statistic Variables in the GTP-U Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the service. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the service. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	The name of the service for which the statistics are displayed. This is a key variable. Type: Information	String
servid	The identification number of the service configured on the system that is currently facilitating the GTP-U service. This is an internal reference number. This is a key variable. Type: Information	Int32
curr-sess	The total number of current sessions. Type: Gauge	Int32
total-setup-sess	The total number of session set up using this service. Type: Counter	Int32
curr-gtpu0-sess	The total number of current GTP-0 sessions. Type: Gauge	Int32
curr-gtpu1-sess	The total number of current GTP-1 sessions. Type: Gauge	Int32
total-uplink-pkts	The total number of uplink packets. Type: Counter	Int64
total-uplink-bytes	The total number of uplink bytes. Type: Counter	Int64
total-dwlink-pkts	The total number of downlink packets. Type: Counter	Int64
total-dwlink-bytes	The total number of downlink bytes. Type: Counter	Int64
total-pkts-discard	The total number of discarded packets. Type: Counter	Int64
total-bytes-discard	The total number of discarded bytes. Type: Counter	Int64
qci#-uplink-pkts	The total number of QCI# uplink packets for the specified QCI number. Type: Counter	Int64
qci#-uplink-bytes	The total number of QCI# uplink bytes for the specified QCI number. Type: Counter	Int64
qci#-dwlink-pkts	The total number of QCI# downlink packets for the specified QCI number. Type: Counter	Int64
qci#-dwlink-byte	The total number of QCI# downlink bytes for the specified QCI number. Type: Counter	Int64

Variables	Description	Data Type
qci#-pkts-discard	The total number of discarded QCI# packets for the specified QCI number. Type: Counter	Int64
qci#-bytes-discard	The total number of discarded QCI# bytes for the specified QCI number. Type: Counter	Int64
non-std-qci-non-gbr-uplink-pkts	The total number of non-standard QCI, non-GBR uplink packets. Type: Counter	Int64
non-std-qci-non-gbr-uplink-bytes	The total number of non-standard QCI, non-GBR uplink bytes. Type: Counter	Int64
non-std-qci-non-gbr-dwlink-pkts	The total number of non-standard QCI, non-GBR downlink packets. Type: Counter	Int64
non-std-qci-non-gbr-dwlink-bytes	The total number of non-standard QCI, non-GBR downlink bytes. Type: Counter	Int64
non-std-qci-non-gbr-pkts-discard	The total number of discarded non-standard QCI, non-GBR packets. Type: Counter	Int64
non-std-qci-non-gbr-bytes-discard	The total number of discarded non-standard QCI, non-GBR bytes. Type: Counter	Int64
non-std-qci-gbr-uplink-pkts	The total number of non-standard QCI, GBR uplink packets. Type: Counter	Int64
non-std-qci-gbr-uplink-bytes	The total number of non-standard QCI, GBR uplink bytes. Type: Counter	Int64
non-std-qci-gbr-dwlink-pkts	The total number of non-standard QCI, GBR downlink packets. Type: Counter	Int64
non-std-qci-gbr-dwlink-bytes	The total number of non-standard QCI, GBR downlink bytes. Type: Counter	Int64
non-std-qci-gbr-pkts-discard	The total number of discarded non-standard QCI, GBR packets. Type: Counter	Int64
non-std-qci-gbr-bytes-discard	The total number of discarded non-standard QCI, GBR bytes. Type: Counter	Int64
total-gbr-qcis-uplink-pkts	The total number of GBR QCIS uplink packets. Type: Counter	Int64
total-gbr-qcis-uplink-bytes	The total number of GBR QCIS uplink bytes. Type: Counter	Int64
total-gbr-qcis-dwlink-pkts	The total number of GBR QCIS downlink packets. Type: Counter	Int64
total-gbr-qcis-dwlink-bytes	The total number of GBR QCIS downlink bytes. Type: Counter	Int64
total-non-gbr-qcis-uplink-pkts	The total number of non-GBR QCIS uplink packets. Type: Counter	Int64

Variables	Description	Data Type
total-non-gbr-qcis-uplink-bytes	The total number of non-GBR QCIS uplink bytes. Type: Counter	Int64
total-non-gbr-qcis-dwlink-pkts	The total number of non-GBR QCIS downlink packets. Type: Counter	Int64
total-non-gbr-qcis-dwlink-bytes	The total number of non-GBR QCIS downlink bytes. Type: Counter	Int64
echo-req-rx	The total number of echo requests received. Type: Counter	Int32
echo-rsp-tx	The total number of echo responses transmitted. Type: Counter	Int32
echo-req-tx	The total number of echo requests transmitted. Type: Counter	Int32
echo-rsp-rx	The total number of echo responses received. Type: Counter	Int32
err-ind-rx	The total number of error indications received. Type: Counter	Int32
err-ind-tx	The total number of error indications transmitted. Type: Counter	Int32
err-ind-rx-dis	The total number of discarded error indications received Type: Counter	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 28

HA Schema Statistics

The Ha schema provides operational statistics that can be used for monitoring and troubleshooting the following products: GGSN, HA, PDSN, P-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 28. Bulk Statistic Variables in the HA Service Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the HA service. This is a key variable.	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the HA service. This is an internal reference number. This is a key variable.	Int32
servname	Displays the name of the HA service for which the statistics are displayed. This is a key variable.	String
disconnects	The total number of sessions that were disconnected.	Int32
num-sessions	The current total number of Mobile IP HA sessions.	Int32
revoc-sent	The total number of HA registration revocations sent.	Int32
revoc-retry-sent	The total number of HA registration revocation messages the system attempted to re-send.	Int32
revoc-ack-recv	The total number of HA registration revocation acknowledgement messages received.	Int32
revoc-timeout	The total number of timeouts that occurred during HA registration revocations.	Int32
revoc-recv	The total number of HA registration revocations received	Int32
revoc-ack-sent	The total number of The total number of HA registration revocation acknowledgement messages sent.	Int32
expiry	The total number of sessions that were disconnected due to the expiration of their lifetime setting.	Int32
dereg	The total number of sessions that were disconnected due to de-registrations.	Int32
admindrop	The total number of sessions that were disconnected due to an administrative clearing of calls (i.e. executing the clear subscriber command).	Int32
miscerror	The total number of sessions that were disconnected due to miscellaneous errors.	Int32
farevocation	The total number of FA revocations that occurred.	Int32
auth-attempt	The total number of authentication attempts made.	Int32
auth-failure	The total number of authentication attempts that were unsuccessful.	Int32
auth-success	The total number of authentication attempts that were successful.	Int32
auth-real-failure	The total number of authentication attempts that were unsuccessful due to the receipt of an access reject message from the AAA server.	Int32
auth-misc-failure	The total number of authentication attempts that were unsuccessful due to occurrences other than the receipt of an access reject messages (i.e. AAA server timeout or internal errors).	Int32
recv-total	The total number of registration requests received.	Int32
recv-initial	The total number of initial registration requests received.	Int32
recv-renew	The total number of renewal registration requests received.	Int32
recv-dereg	The total number of requests for de-registration received.	Int32
recv-ho	The total number of handoff requests received	Int32
recv-ho-3g3g	3GPP2 to 3GPP2 Handoff Requests received	Int32

Variables	Description	Data Type
recv-ho-3gwi	3 GPP2 to WiMax Handoff Requests received	Int32
recv-ho-wi3g	Wimax to 3 GPP2 Handoff Requests Received	Int32
recv-ho-wiwi	Wimax to Wimax Handoff Requests Received	Int32
accept-total	The total number of registration requests accepted.	Int32
accept-reg	The total number of initial registration requests accepted.	Int32
accept-renew	The total number of renewal registration requests accepted.	Int32
accept-dereg	The total number of requests for de-registration accepted.	Int32
accept-ho	The total number of handoff registration requests accepted.	Int32
accept-ho-3g3g	3 GPP2 to 3 GPP2 Handoff Requests accepted	Int32
accept-ho-3gwi	3 GPP2 to WiMax Handoff Requests accepted	Int32
accept-ho-wi3g	Wimax to 3 GPP2 Handoff Requests accepted	Int32
accept-ho-wiwi	Wimax to Wimax Handoff Requests accepted	Int32
denied-total	The total number of registration requests that were denied.	Int32
denied-initial	The total number of initial registration requests denied.	Int32
denied-renew	The total number of renewal registration requests denied.	Int32
denied-dereg	The total number of requests for de-registration denied.	Int32
denied-ho	The total number of handoff registration requests denied.	Int32
denied-ho-3g3g	3 GPP2 to 3 GPP2 Handoff Requests denied	Int32
denied-ho-3gwi	3 GPP2 to WiMax Handoff Requests denied	Int32
denied-ho-wi3g	Wimax to 3 GPP2 Handoff Requests denied	Int32
denied-ho-wiwi	Wimax to Wimax Handoff Requests denied	Int32
discard-total	The total number of registration requests that were discarded.	Int32
reply-total	The total number of registration replies sent.	Int32
reply-acceptreg	The total number of successful registration replies sent.	Int32
reply-acceptdereg	The total number of successful de-registration replies sent.	Int32
reply-denied	The total number of denied registration replies sent.	Int32
reply-badreq	The total number of denied registration replies that were sent with a reply code of 86H (Registration Denied - poorly formed request).	Int32
reply-mismatchid	The total number of denied registration replies that were sent with a reply code of 85H (Registration Denied - registration identification mismatch).	Int32
reply-adminprohib	The total number of denied registration replies that were sent with a reply code of 81H (Registration Denied - administratively prohibited).	Int32

Variables	Description	Data Type
reply-unspecerr	The total number of denied registration replies that were sent with a reply code of 80H (Registration Denied - reason unspecified).	Int32
reply-noresource	The total number of denied registration replies that were sent with a reply code of 82H (Registration Denied - insufficient resources).	Int32
reply-mnauthfail	The total number of denied registration replies that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication).	Int32
reply-faauthfail	The total number of denied registration replies that were sent with a reply code of 84H (Registration Denied - home agent failed authentication).	Int32
reply-simulbind	The total number of denied registration replies that were sent with a reply code of 87H (Registration Denied - too many simultaneous mobility bindings).	Int32
reply-unknownha	The total number of denied registration replies that were sent with a reply code of 88H (Registration Denied - unknown home agent address).	Int32
reply-revtununavail	The total number of denied registration replies that were sent with a reply code of 89H (Registration Denied - reverse tunneling unavailable).	Int32
reply-revtunmand	The total number of denied registration replies that were sent with a reply code of 8AH (Registration Denied - reverse tunneling mandatory).	Int32
reply-encapunavail	The total number of denied registration replies that were sent with a reply code of 8BH (Registration Denied - reverse tunneling encapsulation style unavailable).	Int32
reply-senderror	The total number of errors that occurred while sending replies.	Int32
reply-unknowncvse	The total number of denied registration replies that were sent with a reply code of 8DH (Registration Denied - unsupported Vendor-ID or unable to interpret Vendor-CVSE-Type.).	Int32
reply-udp-encapunavail	The total number of denied registration replies that were sent with a reply code of 8EH (Registration Denied - ERROR_HA_UDP-ENCAP_UNAVAIL).	Int32
reply-error	The total number of reply errors that occurred.	Int32
reply-cong-drop	The total number of registration replies discarded due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information.	Int32
reply-cong-adminprohib	The total number of denied registration replies that were sent with a reply code of 81H (Registration Denied - administratively prohibited) due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information.	Int32
reply-cong-unknownha	The total number of denied registration replies that were sent with a reply code of 88H (Registration Denied - unknown home agent address) due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information.	Int32
ttlprepaid	The total number of Prepaid calls facilitated by the service.	Int32
curprepaid	The total number of Prepaid calls currently being facilitated by the service.	Int32
ttlonlineauthsucc	The total number of successful Online Authentications for the service.	Int32
ttlonlineauthfail	The total number of successful Online Authentications for the service.	Int32
paaa-query-total	The total number of Binding Context requests received from the proxy-AAA server.	Ctr32

Variables	Description	Data Type
paaa-query-accept	The total number of Binding Context requests received from the proxy-AAA server that were accepted.	Ctr32
paaa-query-denied	The total number of Binding Context requests from the proxy-AAA server that were denied.	Ctr32
paaa-resp-sent	The total number of Binding Context responses that were sent to the proxy-AAA server.	Ctr32
paaa-resp-found	The total number of Binding Context responses that were sent to the proxy-AAA server that indicated that the requested binding context was found.	Ctr32
paaa-resp-notfound	The total number of Binding Context responses that were sent to the proxy-AAA server that indicated that the requested binding context was not found.	Ctr32
paaa-resp-poolover	The total number of Binding Context responses that were sent to the proxy-AAA server that indicated that there is an IP Pool overflow condition for the requested binding context.	Ctr32
paaa-resp-misc	The total number of Binding Context responses that were sent to the proxy-AAA server that indicated other miscellaneous errors for the requested binding context.	Ctr32
ipsec-esp-txpackets	The total number of ESP Encode packets transmitted over IPSec.	Int64
ipsec-esp-txbytes	The total number of ESP Encode Bytes transmitted over IPSec.	Int64
ipsec-ah-txpackets	The total number of AH Encode packets transmitted over IPSec.	Int64
ipsec-ah-txbytes	The total number of AH Encode Bytes transmitted over IPSec.	Int64
ipsec-error-txpackets	The total number of Encode Error packets transmitted over IPSec.	Int64
ipsec-error-txbytes	The total number of Transmit Encode Error Bytes transmitted over IPSec.	Int64
ipsec-esp-rxpackets	The total number of ESP Decode packets received over IPSec.	Int64
ipsec-esp-rxbytes	The total number of ESP Decode Bytes received over IPSec.	Int64
ipsec-ah-rxpackets	The total number of AH Decode packets received over IPSec.	Int64
ipsec-ah-rxbytes	The total number of AH Decode Bytes received over IPSec.	Int64
ipsec-error-packets	The total number of Error packets received over IPSec.	Int64
ipsec-error-bytes	The total number of Error Bytes received over IPSec.	Int64
ipsec-replay-packets	The total number of Error Replay packets received over IPSec.	Int64
ipsec-replay-bytes	The total number of Error Replay Bytes received over IPSec.	Int64
ipsec-decode-packets	The total number of Error Decode packets received over IPSec.	Int64
ipsec-decode-bytes	The total number of Error Decode Bytes received over IPSec.	Int64
ipsec-auth-packets	The total number of Error Authentication packets received over IPSec.	Int64
ipsec-auth-bytes	The total number of Error Authentication Bytes received over IPSec.	Int64
ipsec-tooshort-packets	The total number of Error Too Short packets received over IPSec.	Int64
ipsec-tooshort-bytes	The total number of Receive Error Too Short Bytes received over IPSec.	Int64
ipsec-dpdreq-sent	The total number of DPD requests sent	Int32

Variables	Description	Data Type
ipsec-dpdreq-recv	The total number of DPD requests received	Int32
ipsec-dpdreply-sent	The total number of DPD replies sent	Int32
ipsec-dpdreply-recv	The total number of DPD replies received	Int32
ipsec-dpdtimeout	The total number of DPD timeouts (retransmissions)	Int32
ipsec-dpddisconn	The total number of DPD disconnects	Int32
ipsec-dpdrekey	The total number of DPD phase1 rekeys	Int32
ipsec-nattkeepalive-sent	The total number of NATT keepalives sent	Int32
ipsec-nattkeepalive-recv	The total number of NATT keepalives received	Int32
ipsec-ike-udpflows	The total number of current IKE UDP flows	Int32
ipsec-ike-cookieflows	The total number of current IKE cookie flows	Int32
ipsec-ike-txpackets	The total number of IKE packets transmitted	Int64
ipsec-ike-rxpackets	The total number of IKE packets received	Int64
ipsec-ike-reqrecv	The total number of IKE requests received	Int64
ipsec-ike-udpflowpackets	The total number of IKE UDP flow packets received	Int64
ipsec-ike-cookieflowpackets	The total number of IKE cookie flow packets received	Int64
ipsec-cur-tun	The total current number of IPSEC tunnels	Int32
ipsec-cur-tunestablished	The total number of currently established IPSEC tunnels	Int32
ipsec-ike-fails	The total number of IKE failures	Int32
ipsec-ttl-tun	The total number of tunnels setup	Int32
ipsec-ttl-tunestablished	The total number of tunnels that were established	Int32
ipsec-call-req-rej	The total number of call requests that were rejected	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 29

HNBGW-HNBAP Schema Statistics

The HNBGW-HNBAP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.



Important: Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 29. Bulk Statistic Variables in the HNBGW-HNBAP Schema

Variables	Description	Data Type
HNBGW-HNBAP		
vpnname	Indicates the name of the context in which HNB-GW service is configured. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
vpnid	Indicates the identity number of the context in which HNB-GW service is configured. This is a key variable.	String
servname	Indicates the name of the HNB-GW service for which statistics are collected. This is a key variable.	String
registered-hnb	Indicates the total number of registered HNBs. Trigger: Changes when HNB is successfully registered with HNB-GW. Availability: Across all HNB-GW Services Type: Gauge	Unsigned Int32
registered-ue	Indicates the total number of registered UEs. Trigger: Changes when UE is successfully registered with HNB-GW. Availability: Across all HNB-GW Services Type: Gauge	Unsigned Int32
ue-with-ps-conn	Indicates the total number of UEs with PS connection. Trigger: Changes when PS connection is established with HNB-GW for a UE. Availability: Across all HNB-GW Services Type: Gauge	Unsigned Int32
ue-with-cs-conn	Indicates the total number of UEs with CS connection. Trigger: Changes when CS connection is established with HNB-GW for a UE. Availability: Across all HNB-GW Services Type: Gauge	Unsigned Int32
ue-with-ps-cs-conn	Indicates the total number of UEs with PS and CS connection. Trigger: Changes when PS and CS connections are established with HNB-GW for a UE. Availability: Across all HNB-GW Services Type: Gauge	Unsigned Int32
idle-ue	Indicates the total number of Idle UEs. Trigger: Changes when UE is registered with HNB-GW, but no CS and/or PS connection is established with HNB-GW for this UE. Availability: Across all HNB-GW Services Type: Gauge	Unsigned Int32
hnb-reg-req-rx	Indicates the total number of HNB Register Request message received. Trigger: Increases when HNB Register Request message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-reg-acc-tx	Indicates the total number of HNB Register Accept message transmitted. Trigger: Increases when HNB Register Accept message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-reg-rej-tx	Indicates the total number of HNB Register Reject message transmitted. Trigger: Increases when HNB Register Reject message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-reg-rej-unauth-loc	Indicates the total number of HNB Register Reject message transmitted with cause - Unauthorized Location. Trigger: Increases when HNB Register Reject message is transmitted by HNB-GW with cause - Unauthorized Location. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
hnb-reg-rej-unauth-hnb	Indicates the total number of HNB Register Reject message transmitted with cause - Unauthorized HNB. Trigger: Increases when HNB Register Reject message is transmitted by HNB-GW with cause - Unauthorized HNB. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-reg-rej-overload	Indicates the total number of HNB Register Reject message transmitted with cause - Overload. Trigger: Increases when HNB Register Reject message is transmitted by HNB-GW with cause - Overload. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-reg-rej-hnb-param-mismatch	Indicates the total number of HNB Register Reject message transmitted with cause - HNB Parameter Mismatch. Trigger: Increases when HNB Register Reject message is transmitted by HNB-GW with cause - HNB Parameter Mismatch. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-reg-rej-unspecified	Indicates the total number of HNB Register Reject message transmitted with cause - Unspecified. Trigger: Increases when HNB Register Reject message is transmitted by HNB-GW with cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ue-reg-req-rx	Indicates the total number of UE Register Request message received. Trigger: Increases when UE Register Request message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ue-reg-cause-emergency	Indicates the total number of UE Register Request message received with Registration cause - Emergency. Trigger: Increases when UE Register Request message is received by HNB-GW with Registration cause - Emergency. Availability: Across all HNB-GW Services	Unsigned Int32
ue-reg-cause-normal	Indicates the total number of UE Register Request message received with Registration cause - Normal. Trigger: Increases when UE Register Request message is received by HNB-GW with Registration cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
ue-reg-acc-tx	Indicates the total number of UE Register Accept message transmitted. Trigger: Increases when UE Register Accept message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ue-reg-rej-tx	Indicates the total number of UE Register Reject message transmitted. Trigger: Increases when UE Register Reject message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ue-reg-rej-invalid-ue-id	Indicates the total number of UE Register Reject message transmitted with cause - Invalid UE Identity. Trigger: Increases when UE Register Reject message is transmitted by HNB-GW with cause - Invalid UE Identity. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ue-reg-rej-ue-not-allowed-on-hnb	Indicates the total number of UE Register Reject message transmitted with cause - UE not allowed on HNB. Trigger: Increases when UE Register Reject message is transmitted by HNB-GW with cause - UE not allowed on HNB. Availability: Across all HNB-GW Services	Unsigned Int32
ue-reg-rej-hnb-not-reg	Indicates the total number of UE Register Reject message transmitted with cause - HNB not registered. Trigger: Increases when UE Register Reject message is transmitted by HNB-GW with cause - HNB not registered. Availability: Across all HNB-GW Services	Unsigned Int32
ue-reg-rej-unspecified	Indicates the total number of UE Register Reject message transmitted with cause - Unspecified. Trigger: Increases when UE Register Reject message is transmitted by HNB-GW with cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-dereg-rx	Indicates the total number of HNB De-register message received. Trigger: Increases when HNB De-register message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-dereg-rx-normal	Indicates the total number of HNB De-register message received with cause - Normal. Trigger: Increases when HNB De-register message is received by HNB-GW with cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-dereg-rx-unspecified	Indicates the total number of HNB De-register message received with cause - Unspecified. Trigger: Increases when HNB De-register message is received by HNB-GW with cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-dereg-tx	Indicates the total number of HNB De-register message transmitted. Trigger: Increases when HNB De-register message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-dereg-tx-overload	Indicates the total number of HNB De-register message transmitted with cause - Overload. Trigger: Increases when HNB De-register message is transmitted by HNB-GW with cause - Overload. Availability: Across all HNB-GW Services	Unsigned Int32
hnb-dereg-tx-unspecified	Indicates the total number of HNB De-register message transmitted with cause - Unspecified. Trigger: Increases when HNB De-register message is transmitted by HNB-GW with cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ue-dereg-rx	Indicates the total number of UE De-register message received. Trigger: Increases when UE De-register message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ue-dereg-rx-conn-with-ue-lost	Indicates the total number of UE De-register message received with cause - Connection with UE lost. Trigger: Increases when UE De-register message is received by HNB-GW with cause - Connection with UE lost. Availability: Across all HNB-GW Services	Unsigned Int32
ue-dereg-rx-ue-rrc-rel	Indicates the total number of UE De-register message received with cause - UE RRC Release. Trigger: Increases when UE De-register message is received by HNB-GW with cause - UE RRC Release. Availability: Across all HNB-GW Services	Unsigned Int32
ue-dereg-rx-unspecified	Indicates the total number of UE De-register message received with cause - Unspecified. Trigger: Increases when UE De-register message is received by HNB-GW with cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ue-dereg-rx-ue-relocated	Indicates the total number of UE De-register message received with cause - UE Relocated. Trigger: Increases when UE De-register message is received by HNB-GW with cause - UE Relocated. Availability: Across all HNB-GW Services	Unsigned Int32
ue-dereg-tx	Indicates the total number of UE De-register message transmitted. Trigger: Increases when UE De-register message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ue-dereg-tx-ue-reg-in-another-hnb	Indicates the total number of UE De-register message transmitted with cause - UE registered in another HNB. Trigger: Increases when UE De-register message is transmitted by HNB-GW with cause - UE registered in another HNB. Availability: Across all HNB-GW Services	Unsigned Int32
ue-dereg-tx-unspecified	Indicates the total number of UE De-register message transmitted with cause - Unspecified. Trigger: Increases when UE De-register message is transmitted by HNB-GW with cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-conn	Indicates the total number of radio access bearer connection in CS domain. Trigger: Changes when a RAB established a connection in CS domain. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-conn	Indicates the total number of radio access bearer connection in PS domain. Trigger: Changes when a RAB established a connection in PS domain. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx	Indicates the total number of Error Indication message received. Trigger: Increases when Error Indication message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-overload	Indicates the total number of Error Indication message received with Radio Network Layer cause -Overload. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause -Overload. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
err-ind-rx-unauth-loc	Indicates the total number of Error Indication message received with Radio Network Layer cause - Unauthorized Location. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - Unauthorized Location. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-unauth-hnb	Indicates the total number of Error Indication message received with Radio Network Layer cause - Unauthorized HNB. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - Unauthorized HNB. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-hnb-param-mismatch	Indicates the total number of Error Indication message received with Radio Network Layer cause - HNB Parameter mismatch. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - HNB Parameter mismatch. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-invalid-ue-id	Indicates the total number of Error Indication message received with Radio Network Layer cause - Invalid UE Identity. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - Invalid UE Identity. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-ue-not-allowed-on-this-hnb	Indicates the total number of Error Indication message received with Radio Network Layer cause - UE not allowed on this HNB. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - UE not allowed on this HNB. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-ue-unauth	Indicates the total number of Error Indication message received with Radio Network Layer cause - UE unauthorized. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - UE unauthorized. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-conn-with-ue-lost	Indicates the total number of Error Indication message received with Radio Network Layer cause - Connection with UE lost. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - Connection with UE lost. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-ue-rrc-rel	Indicates the total number of Error Indication message received with Radio Network Layer cause - UE RRC Release. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - UE RRC Release. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-hnb-not-reg	Indicates the total number of Error Indication message received with Radio Network Layer cause - HNB not registered. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - HNB not registered. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
err-ind-rx-rl-unspecified	Indicates the total number of Error Indication message received with Radio Network Layer cause - Unspecified. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-normal	Indicates the total number of Error Indication message received with Radio Network Layer cause - Normal. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-ue-relocated	Indicates the total number of Error Indication message received with Radio Network Layer cause - UE relocated. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - UE relocated. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-ue-reg-in-another-hnb	Indicates the total number of Error Indication message received with Radio Network Layer cause - UE registered in another HNB. Trigger: Increases when Error Indication message is received by HNB-GW with Radio Network Layer cause - UE registered in another HNB. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-trans-res-unavailable	Indicates the total number of Error Indication message received with Transport Layer cause - Transport resource unavailable. Trigger: Increases when Error Indication message is received by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-trans-unspecified	Indicates the total number of Error Indication message received with Transport Layer cause - Unspecified. Trigger: Increases when Error Indication message is received by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-trans-syn-err	Indicates the total number of Error Indication message received with Protocol Layer cause - Transfer syntax error. Trigger: Increases when Error Indication message is received by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-abs-syn-err-rej	Indicates the total number of Error Indication message received with Protocol Layer cause - Abstract syntax error (Reject). Trigger: Increases when Error Indication message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-abs-syn-err-ign-notify	Indicates the total number of Error Indication message received with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: Increases when Error Indication message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
err-ind-rx-msg-not-comp-with-rcvr-state	Indicates the total number of Error Indication message received with Protocol Layer cause - Msg not compatible with receiver state. Trigger: Increases when Error Indication message is received by HNB-GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-semantic-err	Indicates the total number of Error Indication message received with Protocol Layer cause - Semantic error. Trigger: Increases when Error Indication message is received by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-prot-unspecified	Indicates the total number of Error Indication message received with Protocol Layer cause - Unspecified. Trigger: Increases when Error Indication message is received by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-abs-syn-err-falsely-construct-msg	Indicates the total number of Error Indication message received with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: Increases when Error Indication message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-processing-overload	Indicates the total number of Error Indication message received with Miscellaneous cause - Processing Overload. Trigger: Increases when Error Indication message is received by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-hw-failure	Indicates the total number of Error Indication message received with Miscellaneous cause - Hardware Failure. Trigger: Increases when Error Indication message is received by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-oam-intervention	Indicates the total number of Error Indication message received with Miscellaneous cause - O&M Intervention. Trigger: Increases when Error Indication message is received by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-rx-misc-unspecified	Indicates the total number of Error Indication message received with Miscellaneous cause - Unspecified. Trigger: Increases when Error Indication message is received by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx	Indicates the total number of Error Indication message transmitted. Trigger: Increases when Error Indication message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
err-ind-tx-overload	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause -Overload. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause -Overload. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-unauth-loc	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Unauthorized Location. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Unauthorized Location. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-unauth-hnb	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Unauthorized HNB. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Unauthorized HNB. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-hnb-param-mismatch	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - HNB Parameter mismatch. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - HNB Parameter mismatch. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-invalid-ue-id	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Invalid UE Identity. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Invalid UE Identity. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-ue-not-allowed-on-this-hnb	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - UE not allowed on this HNB. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - UE not allowed on this HNB. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-ue-unauth	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - UE unauthorized. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - UE unauthorized. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-conn-with-ue-lost	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Connection with UE lost. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Connection with UE lost. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-ue-rrc-rel	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - UE RRC Release. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - UE RRC Release. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
err-ind-tx-hnb-not-reg	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - HNB not registered. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - HNB not registered. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-rl-unspecified	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Unspecified. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-normal	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Normal. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-ue-relocated	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - UE relocated. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - UE relocated. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-ue-reg-in-another-hnb	Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - UE registered in another HNB. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - UE registered in another HNB. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-trans-res-unavailable	Indicates the total number of Error Indication message transmitted with Transport Layer cause - Transport resource unavailable. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-trans-unspecified	Indicates the total number of Error Indication message transmitted with Transport Layer cause - Unspecified. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-trans-syn-err	Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Transfer syntax error. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-abs-syn-err-rej	Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Abstract syntax error (Reject). Trigger: Increases when Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
err-ind-tx-abs-syn-err-ign-notify	Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: Increases when Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-msg-not-comp-with-revr-state	Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Msg not compatible with receiver state. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-semantic-err	Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Semantic error. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-prot-unspecified	Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Unspecified. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-abs-syn-err-falsely-construct-msg	Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: Increases when Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-processing-overload	Indicates the total number of Error Indication message transmitted with Miscellaneous cause - Processing Overload. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-hw-failure	Indicates the total number of Error Indication message transmitted with Miscellaneous cause - Hardware Failure. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-oam-intervention	Indicates the total number of Error Indication message transmitted with Miscellaneous cause - O&M Intervention. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
err-ind-tx-misc-unspecified	Indicates the total number of Error Indication message transmitted with Miscellaneous cause - Unspecified. Trigger: Increases when Error Indication message is transmitted by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 30

HNBGW-RANAP Schema Statistics

The HNBGW-RANAP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 30. Bulk Statistic Variables in the HNBGW-RANAP Schema

Variables	Description	Data Type
vpnname	The name of the context in which HNB-GW service is configured. This is a key variable.	String
vpnid	The identity number of the context in which HNB-GW service is configured. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
servname	The name of the HNB-GW service for which statistics are collected. This is a key variable.	String
cs-initial-ue-rx	CS Domain: Indicates the total number of Initial UE message received. Trigger: When RANAP CS Domain Initial UE message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-dir-transfer-rx	CS Domain: Indicates the total number of Direct Transfer message received. Trigger: When RANAP CS Domain Direct Transfer message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-dir-transfer-tx	CS Domain: Indicates the total number of Direct Transfer message transmitted. Trigger: When RANAP CS Domain Direct Transfer message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reset-rx	CS Domain: Indicates the total number of Reset message received. Trigger: When RANAP CS Domain Reset message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reset-tx	CS Domain: Indicates the total number of Reset message transmitted. Trigger: When RANAP CS Domain Reset message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reset-ack-rx	CS Domain: Indicates the total number of Reset Ack message received. Trigger: When RANAP CS Domain Reset Ack message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reset-ack-tx	CS Domain: Indicates the total number of Reset Ack message transmitted. Trigger: When RANAP CS Domain Reset Ack message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reset-res-rx	CS Domain: Indicates the total number of Reset Resource message received. Trigger: When RANAP CS Domain Reset Resource message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reset-res-tx	CS Domain: Indicates the total number of Reset Resource message transmitted. Trigger: When RANAP CS Domain Reset Resource message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reset-res-ack-rx	CS Domain: Indicates the total number of Reset Resource Ack message received. Trigger: When RANAP CS Domain Reset Resource Ack message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reset-res-ack-tx	CS Domain: Indicates the total number of Reset Resource Ack message transmitted. Trigger: When RANAP CS Domain Reset Resource Ack message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-iu-rel-req-rx	CS Domain: Indicates the total number of Iu Release Request message received. Trigger: When RANAP CS Domain Iu Release Request message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-iu-rel-cmd-tx	CS Domain: Indicates the total number of Iu Release Command message transmitted. Trigger: When RANAP CS Domain Iu Release Command message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-iu-rel-comp-rx	CS Domain: Indicates the total number of Iu Release Complete message received. Trigger: When RANAP CS Domain Iu Release Complete message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-paging-req-tx	CS Domain: Indicates the total number of Paging Request message transmitted. Trigger: When RANAP CS Domain Paging Request message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-req-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-req-tx-rab-setup-mod-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for RAB Setup/Mod. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-req-tx-rab-rel-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for RAB Release. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-rsp-rx	CS Domain: Indicates the total number of RAB Assignment Response message received. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-rsp-rx-rab-setup-mod-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for RAB Setup/Mod Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-rsp-rx-rab-setup-mod-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for RAB Setup/Mod Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
cs-rab-ass-rsp-rx-rab-rel-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for RAB Release Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-rsp-rx-rab-rel-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for RAB Release Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-rsp-rx-rab-queued	CS Domain: Indicates the total number of RAB Assignment Response message received for RAB Queued. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-rsp-rx-rab-setup-mod-rel-que-drop	CS Domain: Indicates the total number of RAB Assignment Response message received for RAB Set/Mod/Rel/Que Dropped. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for RAB Set/Mod/Rel/Que Dropped. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr-codec-rab-setup-mod-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for UMTS AMR Codec for RAB Setup/Mod. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for UMTS AMR Codec for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr-codec-rab-rel-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for UMTS AMR Codec for RAB Release. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for UMTS AMR Codec for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr-codec-rab-setup-mod-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR Codec for RAB Setup/Mod Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR Codec for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr-codec-rab-setup-mod-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR Codec for RAB Setup/Mod Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR Codec for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr-codec-rab-rel-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR Codec for RAB Release Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR Codec for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-rab-ass-amr-codec-rab-rel-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR Codec for RAB Release Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR Codec for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr-codec-rab-queued	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR Codec for RAB Queued. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR Codec for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr2-codec-rab-setup-mod-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for UMTS AMR2 Codec for RAB Setup/Mod. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for UMTS AMR2 Codec for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr2-codec-rab-rel-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for UMTS AMR2 Codec for RAB Release. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for UMTS AMR2 Codec for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr2-codec-rab-setup-mod-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR2 Codec for RAB Setup/Mod Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR2 Codec for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr2-codec-rab-setup-mod-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR2 Codec for RAB Setup/Mod Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR2 Codec for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr2-codec-rab-rel-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR2 Codec for RAB Release Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR2 Codec for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr2-codec-rab-rel-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR2 Codec for RAB Release Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR2 Codec for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-amr2-codec-rab-queued	CS Domain: Indicates the total number of RAB Assignment Response message received for UMTS AMR2 Codec for RAB Queued. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for UMTS AMR2 Codec for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
cs-rab-ass-other-codec-rab-setup-mod-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for Other Codec for RAB Setup/Mod. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for Other Codec for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-other-codec-rab-rel-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for Other Codec for RAB Release. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for Other Codec for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-other-codec-rab-setup-mod-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for Other Codec for RAB Setup/Mod Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Other Codec for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-other-codec-rab-setup-mod-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for Other Codec for RAB Setup/Mod Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Other Codec for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-other-codec-rab-rel-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for Other Codec for RAB Release Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Other Codec for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-other-codec-rab-rel-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for Other Codec for RAB Release Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Other Codec for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-other-codec-rab-queued	CS Domain: Indicates the total number of RAB Assignment Response message received for Other Codec for RAB Queued. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Other Codec for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-no-codec-rab-setup-mod-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for NO Codec for RAB Setup/Mod. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for NO Codec for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-no-codec-rab-rel-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for NO Codec for RAB Release. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for NO Codec for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-rab-ass-no-codec-rab-setup-mod-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for NO Codec for RAB Setup/Mod Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for NO Codec for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-no-codec-rab-setup-mod-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for NO Codec for RAB Setup/Mod Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for NO Codec for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-no-codec-rab-rel-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for NO Codec for RAB Release Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for NO Codec for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-no-codec-rab-rel-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for NO Codec for RAB Release Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for NO Codec for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-no-codec-rab-queued	CS Domain: Indicates the total number of RAB Assignment Response message received for NO Codec for RAB Queued. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for NO Codec for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-unknown-codec-rab-setup-mod-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for Unknown Codec for RAB Setup/Mod. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for Unknown Codec for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-unknown-codec-rab-rel-tx	CS Domain: Indicates the total number of RAB Assignment Request message transmitted for Unknown Codec for RAB Release. Trigger: When RANAP CS Domain RAB Assignment Request message is transmitted by HNB-GW for Unknown Codec for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-unknown-codec-rab-setup-mod-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for Unknown Codec for RAB Setup/Mod Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Unknown Codec for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-unknown-codec-rab-setup-mod-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for Unknown Codec for RAB Setup/Mod Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Unknown Codec for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
cs-rab-ass-unknown-codec-rab-rel-succ-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for Unknown Codec for RAB Release Success. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Unknown Codec for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-unknown-codec-rab-rel-fail-rx	CS Domain: Indicates the total number of RAB Assignment Response message received for Unknown Codec for RAB Release Fail. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Unknown Codec for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-rab-ass-unknown-codec-rab-queued	CS Domain: Indicates the total number of RAB Assignment Response message received for Unknown Codec for RAB Queued. Trigger: When RANAP CS Domain RAB Assignment Response message is received by HNB-GW for Unknown Codec for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-tx	CS Domain: Indicates the total number of Relocation Request message transmitted. Trigger: When RANAP CS Domain Relocation Request message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-tx-rab-setup-tx	CS Domain: Indicates the total number of Relocation Request message transmitted for RAB Setup. Trigger: When RANAP CS Domain Relocation Request message is transmitted by HNB-GW for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-ack-rx	CS Domain: Indicates the total number of Relocation Request Ack message received. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-ack-rx-rab-setup-succ-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for RAB Setup Success. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-ack-rx-rab-setup-fail-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for RAB Setup Fail. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-ack-rx-rab-setup-dropped	CS Domain: Indicates the total number of Relocation Request Ack message received for RAB Setup Dropped. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for RAB Setup Dropped. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-reloc-req-amr-codec-rab-setup-tx	CS Domain: Indicates the total number of Relocation Request message transmitted for UMTS AMR Codec for RAB Setup. Trigger: When RANAP CS Domain Relocation Request message is transmitted by HNB-GW for UMTS AMR Codec for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-amr-codec-rab-setup-succ-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for UMTS AMR Codec for RAB Setup Success. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for UMTS AMR Codec for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-amr-codec-rab-setup-fail-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for UMTS AMR Codec for RAB Setup Fail. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for UMTS AMR Codec for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-amr2-codec-rab-setup-tx	CS Domain: Indicates the total number of Relocation Request message transmitted for UMTS AMR2 Codec for RAB Setup. Trigger: When RANAP CS Domain Relocation Request message is transmitted by HNB-GW for UMTS AMR2 Codec for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-amr2-codec-rab-setup-succ-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for UMTS AMR2 Codec for RAB Setup Success. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for UMTS AMR2 Codec for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-amr2-codec-rab-setup-fail-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for UMTS AMR2 Codec for RAB Setup Fail. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for UMTS AMR2 Codec for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-other-codec-rab-setup-tx	CS Domain: Indicates the total number of Relocation Request message transmitted for Other Codec for RAB Setup. Trigger: When RANAP CS Domain Relocation Request message is transmitted by HNB-GW for Other Codec for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-other-codec-rab-setup-succ-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for Other Codec for RAB Setup Success. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for Other Codec for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-other-codec-rab-setup-fail-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for Other Codec for RAB Setup Fail. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for Other Codec for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-reloc-req-no-codec-rab-setup-tx	CS Domain: Indicates the total number of Relocation Request message transmitted for NO Codec for RAB Setup. Trigger: When RANAP CS Domain Relocation Request message is transmitted by HNB-GW for NO Codec for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-no-codec-rab-setup-succ-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for NO Codec for RAB Setup Success. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for NO Codec for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-no-codec-rab-setup-fail-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for NO Codec for RAB Setup Fail. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for NO Codec for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-unknown-codec-rab-setup-tx	CS Domain: Indicates the total number of Relocation Request message transmitted for Unknown Codec for RAB Setup. Trigger: When RANAP CS Domain Relocation Request message is transmitted by HNB-GW for Unknown Codec for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-unknown-codec-rab-setup-succ-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for Unknown Codec for RAB Setup Success. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for Unknown Codec for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-req-unknown-codec-rab-setup-fail-rx	CS Domain: Indicates the total number of Relocation Request Ack message received for Unknown Codec for RAB Setup Fail. Trigger: When RANAP CS Domain Relocation Request Ack message is received by HNB-GW for Unknown Codec for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-detect-rx	CS Domain: Indicates the total number of Relocation Detect message received. Trigger: When RANAP CS Domain Relocation Detect message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-comp-rx	CS Domain: Indicates the total number of Relocation Complete message received. Trigger: When RANAP CS Domain Relocation Complete message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-fail-rx	CS Domain: Indicates the total number of Relocation Failure message received. Trigger: When RANAP CS Domain Relocation Failure message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-reloc-reqd-rx	CS Domain: Indicates the total number of Relocation Required message received. Trigger: When RANAP CS Domain Relocation Required message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-fwd-srms-ctx-req-rx	CS Domain: Indicates the total number of Fwd SRNS Context Request message received. Trigger: When RANAP CS Domain Fwd SRNS Context Request message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-srms-ctx-req-tx	CS Domain: Indicates the total number of SRNS Context Request message transmitted. Trigger: When RANAP CS Domain SRNS Context Request message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-srms-ctx-rsp-rx	CS Domain: Indicates the total number of SRNS Context Response message received. Trigger: When RANAP CS Domain SRNS Context Response message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-initial-ue-rx	PS Domain: Indicates the total number of Initial UE message received. Trigger: When Initial UE message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-dir-transfer-rx	PS Domain: Indicates the total number of Direct Transfer message received. Trigger: When Direct Transfer message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-dir-transfer-tx	PS Domain: Indicates the total number of Direct Transfer message transmitted. Trigger: When Direct Transfer message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reset-rx	PS Domain: Indicates the total number of Reset message received. Trigger: When Reset message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reset-tx	PS Domain: Indicates the total number of Reset message transmitted. Trigger: When Reset message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reset-ack-rx	PS Domain: Indicates the total number of Reset Ack message received. Trigger: When Reset Ack message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reset-ack-tx	PS Domain: Indicates the total number of Reset Ack message transmitted. Trigger: When Reset Ack message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reset-res-rx	PS Domain: Indicates the total number of Reset Resource message received. Trigger: When Reset Resource message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reset-res-tx	PS Domain: Indicates the total number of Reset Resource message transmitted. Trigger: When Reset Resource message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reset-res-ack-rx	PS Domain: Indicates the total number of Reset Resource Ack message received. Trigger: When Reset Resource Ack message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
ps-reset-res-ack-tx	PS Domain: Indicates the total number of Reset Resource Ack message transmitted. Trigger: When Reset Resource Ack message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-iu-rel-req-rx	PS Domain: Indicates the total number of Iu Release Request message received. Trigger: When Iu Release Request message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-iu-rel-cmd-tx	PS Domain: Indicates the total number of Iu Release Command message transmitted. Trigger: When Iu Release Command message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-iu-rel-comp-rx	PS Domain: Indicates the total number of Iu Release Complete message received. Trigger: When Iu Release Complete message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-paging-req-tx	PS Domain: Indicates the total number of Paging Request message transmitted. Trigger: When Paging Request message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-req-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted. Trigger: When RAB Assignment Request message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-req-tx-rab-setup-mod-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for RAB Setup/Mod. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-req-tx-rab-rel-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for RAB Release. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-rsp-rx	PS Domain: Indicates the total number of RAB Assignment Response message received. Trigger: When RAB Assignment Response message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-rsp-rx-rab-setup-mod-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for RAB Setup/Mod Success. Trigger: When RAB Assignment Response message is received by HNB-GW for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-rsp-rx-rab-setup-mod-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for RAB Setup/Mod Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-rab-ass-rsp-rx-rab-rel-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for RAB Release Success. Trigger: When RAB Assignment Response message is received by HNB-GW for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-rsp-rx-rab-rel-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for RAB Release Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-rsp-rx-rab-queued	PS Domain: Indicates the total number of RAB Assignment Response message received for RAB Queued. Trigger: When RAB Assignment Response message is received by HNB-GW for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-rsp-rx-rab-setup-mod-rel-que-drop	PS Domain: Indicates the total number of RAB Assignment Response message received for RAB Set/Mod/Rel/Que Dropped. Trigger: When RAB Assignment Response message is received by HNB-GW for RAB Set/Mod/Rel/Que Dropped. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-conv-class-rab-setup-mod-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Conversational Class for RAB Setup/Mod. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Conversational Class for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-conv-class-rab-rel-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Conversational Class for RAB Release. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Conversational Class for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-conv-class-rab-setup-mod-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Conversational Class for RAB Setup/Mod Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Conversational Class for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-conv-class-rab-setup-mod-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Conversational Class for RAB Setup/Mod Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Conversational Class for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-conv-class-rab-rel-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Conversational Class for RAB Release Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Conversational Class for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
ps-rab-ass-conv-class-rab-rel-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Conversational Class for RAB Release Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Conversational Class for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-conv-class-rab-queued	PS Domain: Indicates the total number of RAB Assignment Response message received for Conversational Class for RAB Queued. Trigger: When RAB Assignment Response message is received by HNB-GW for Conversational Class for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-stream-class-rab-setup-mod-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Streaming Class for RAB Setup/Mod. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Streaming Class for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-stream-class-rab-rel-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Streaming Class for RAB Release. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Streaming Class for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-stream-class-rab-setup-mod-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Streaming Class for RAB Setup/Mod Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Streaming Class for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-stream-class-rab-setup-mod-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Streaming Class for RAB Setup/Mod Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Streaming Class for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-stream-class-rab-rel-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Streaming Class for RAB Release Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Streaming Class for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-stream-class-rab-rel-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Streaming Class for RAB Release Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Streaming Class for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-stream-class-rab-queued	PS Domain: Indicates the total number of RAB Assignment Response message received for Streaming Class for RAB Queued. Trigger: When RAB Assignment Response message is received by HNB-GW for Streaming Class for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-rab-ass-inter-class-rab-setup-mod-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Interactive for RAB Setup/Mod. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Interactive for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-inter-class-rab-rel-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Interactive for RAB Release. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Interactive for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-inter-class-rab-setup-mod-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Interactive for RAB Setup/Mod Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Interactive for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-inter-class-rab-setup-mod-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Interactive for RAB Setup/Mod Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Interactive for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-inter-class-rab-rel-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Interactive for RAB Release Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Interactive for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-inter-class-rab-rel-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Interactive for RAB Release Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Interactive for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-inter-class-rab-queued	PS Domain: Indicates the total number of RAB Assignment Response message received for Interactive for RAB Queued. Trigger: When RAB Assignment Response message is received by HNB-GW for Interactive for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-back-class-rab-setup-mod-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Background for RAB Setup/Mod. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Background for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-back-class-rab-rel-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Background for RAB Release. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Background for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-rab-ass-back-class-rab-setup-mod-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Background for RAB Setup/Mod Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Background for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-back-class-rab-setup-mod-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Background for RAB Setup/Mod Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Background for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-back-class-rab-rel-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Background for RAB Release Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Background for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-back-class-rab-rel-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Background for RAB Release Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Background for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-back-class-rab-queued	PS Domain: Indicates the total number of RAB Assignment Response message received for Background for RAB Queued. Trigger: When RAB Assignment Response message is received by HNB-GW for Background for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-unkwn-class-rab-setup-mod-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Unknown for RAB Setup/Mod. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Unknown for RAB Setup/Mod. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-unkwn-class-rab-rel-tx	PS Domain: Indicates the total number of RAB Assignment Request message transmitted for Unknown for RAB Release. Trigger: When RAB Assignment Request message is transmitted by HNB-GW for Unknown for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-unkwn-class-rab-setup-mod-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Unknown for RAB Setup/Mod Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Unknown for RAB Setup/Mod Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-unkwn-class-rab-setup-mod-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Unknown for RAB Setup/Mod Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Unknown for RAB Setup/Mod Fail. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-rab-ass-unkwn-class-rab-rel-succ-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Unknown for RAB Release Success. Trigger: When RAB Assignment Response message is received by HNB-GW for Unknown for RAB Release Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-unkwn-class-rab-rel-fail-rx	PS Domain: Indicates the total number of RAB Assignment Response message received for Unknown for RAB Release Fail. Trigger: When RAB Assignment Response message is received by HNB-GW for Unknown for RAB Release Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-rab-ass-unkwn-class-rab-queued	PS Domain: Indicates the total number of RAB Assignment Response message received for Unknown for RAB Queued. Trigger: When RAB Assignment Response message is received by HNB-GW for Unknown for RAB Queued. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-tx	PS Domain: Indicates the total number of Relocation Request message transmitted. Trigger: When Relocation Request message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-tx-rab-setup-tx	PS Domain: Indicates the total number of Relocation Request message transmitted for RAB Setup message transmitted. Trigger: When Relocation Request message is transmitted by HNB-GW for RAB Setup message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-ack-rx	PS Domain: Indicates the total number of Relocation Request Ack message received. Trigger: When Relocation Request Ack message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-ack-rx-rab-setup-succ-rx	PS Domain: Indicates the total number of Relocation Request Ack message received for RAB Setup Success. Trigger: When Relocation Request Ack message is received by HNB-GW for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-ack-rx-rab-setup-fail-rx	PS Domain: Indicates the total number of Relocation Request Ack message received for RAB Setup Fail. Trigger: When Relocation Request Ack message is received by HNB-GW for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-conv-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Request message transmitted for Conversational Class for RAB Setup. Trigger: When Relocation Request message is transmitted by HNB-GW for Conversational Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-conv-class-rab-setup-succ-rx	PS Domain: Indicates the total number of Relocation Request message received for Conversational Class for RAB Setup Success. Trigger: When Relocation Request message is received by HNB-GW for Conversational Class for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-reloc-req-conv-class-rab-setup-fail-rx	PS Domain: Indicates the total number of Relocation Request message received for Conversational Class for RAB Setup Fail. Trigger: When Relocation Request message is received by HNB-GW for Conversational Class for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-stream-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Request message transmitted for Streaming Class for RAB Setup. Trigger: When Relocation Request message is transmitted by HNB-GW for Streaming Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-stream-class-rab-setup-succ-rx	PS Domain: Indicates the total number of Relocation Request message received for Streaming Class for RAB Setup Success. Trigger: When Relocation Request message is received by HNB-GW for Streaming Class for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-stream-class-rab-setup-fail-rx	PS Domain: Indicates the total number of Relocation Request message received for Streaming Class for RAB Setup Fail. Trigger: When Relocation Request message is received by HNB-GW for Streaming Class for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-inter-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Request message transmitted for Interactive Class for RAB Setup. Trigger: When Relocation Request message is transmitted by HNB-GW for Interactive Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-inter-class-rab-setup-succ-rx	PS Domain: Indicates the total number of Relocation Request message received for Interactive Class for RAB Setup Success. Trigger: When Relocation Request message is received by HNB-GW for Interactive Class for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-inter-class-rab-setup-fail-rx	PS Domain: Indicates the total number of Relocation Request message received for Interactive Class for RAB Setup Fail. Trigger: When Relocation Request message is received by HNB-GW for Interactive Class for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-back-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Request message transmitted for Background Class for RAB Setup. Trigger: When Relocation Request message is transmitted by HNB-GW for Background Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-back-class-rab-setup-succ-rx	PS Domain: Indicates the total number of Relocation Request message received for Background Class for RAB Setup Success. Trigger: When Relocation Request message is received by HNB-GW for Background Class for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-reloc-req-back-class-rab-setup-fail-rx	PS Domain: Indicates the total number of Relocation Request message received for Background Class for RAB Setup Fail. Trigger: When Relocation Request message is received by HNB-GW for Background Class for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-unkwn-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Request message transmitted for Unknown Class for RAB Setup. Trigger: When Relocation Request message is transmitted by HNB-GW for Unknown Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-unkwn-class-rab-setup-succ-rx	PS Domain: Indicates the total number of Relocation Request message received for Unknown Class for RAB Setup Success. Trigger: When Relocation Request message is received by HNB-GW for Unknown Class for RAB Setup Success. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-req-unkwn-class-rab-setup-fail-rx	PS Domain: Indicates the total number of Relocation Request message received for Unknown Class for RAB Setup Fail. Trigger: When Relocation Request message is received by HNB-GW for Unknown Class for RAB Setup Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-detect-rx	PS Domain: Indicates the total number of Relocation Detect message received. Trigger: When Relocation Detect message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-comp-rx	PS Domain: Indicates the total number of Relocation Complete message received. Trigger: When Relocation Complete message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-fail-rx	PS Domain: Indicates the total number of Relocation Failure message received. Trigger: When Relocation Failure message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-reqd-rx	PS Domain: Indicates the total number of Relocation Required message received. Trigger: When Relocation Required message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-prep-failure-tx	PS Domain: Indicates the total number of Relocation Prep Failure message transmitted. Trigger: When Relocation Prep Failure message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-fwd-sms-ctx-req-rx	PS Domain: Indicates the total number of Fwd SRNS Context Request message received. Trigger: When Fwd SRNS Context Request message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-cmd-tx	PS Domain: Indicates the total number of Relocation Command message transmitted. Trigger: When Relocation Command message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
ps-reloc-cmd-tx-rab-setup-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for RAB Setup. Trigger: When Relocation Command message is transmitted by HNB-GW for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-cmd-tx-rab-rel-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for RAB Release. Trigger: When Relocation Command message is transmitted by HNB-GW for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-cmd-tx-rab-setup-rel-local-fail	PS Domain: Indicates the total number of Relocation Command message transmitted for RAB Setup/Release Local Failure. Trigger: When Relocation Command message is transmitted by HNB-GW for RAB Setup/Release Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-invalid-rab-id	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Radio Network Layer Cause for Invalid Rab Id. Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Radio Network Layer Cause for Invalid Rab Id. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-interact-othr-proc	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Radio Network Layer Cause for Interaction With Other Proc. Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Radio Network Layer Cause for Interaction With Other Proc. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-sig-trans-res-fail	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Transport Layer Cause for Sig Transport Resource Fail. Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Transport Layer Cause for Sig Transport Resource Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-iu-conn-fail-to-estab	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Transport Layer Cause for Iu Transport Conn failed to Establish. Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Transport Layer Cause for Iu Transport Conn failed to Establish. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-trans-syn-err	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Protocol Layer Cause for Transfer syntax error. Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-abs-syn-err-ign	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Protocol Layer Cause for Abstract syntax error(Ignore). Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Abstract syntax error(Ignore). Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-reloc-local-fail-semantic-err	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Protocol Layer Cause for Semantic error. Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-abs-syn-err-rej	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Protocol Layer Cause for Abstract syntax error (Reject). Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-msg-not-comp	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Protocol Layer Cause for Msg not compatible with receiver state. Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-falsely-construct-msg	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Protocol Layer Cause for Abstract syntax error (Falsely constructed msg). Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-no-res-avable	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Miscellaneous Cause for No Resource Available. Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Miscellaneous Cause for No Resource Available. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-local-fail-unspecified	PS Domain: Indicates the total number of RAB Setup/Release Local Failure message transmitted for Miscellaneous Cause for Unspecified. Trigger: When RAB Setup/Release Local Failure message is transmitted by HNB-GW for Miscellaneous Cause for Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-conv-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Conversational Class for RAB Setup. Trigger: When Relocation Command message is transmitted by HNB-GW for Conversational Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-conv-class-rab-rel-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Conversational Class for RAB Release. Trigger: When Relocation Command message is transmitted by HNB-GW for Conversational Class for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-conv-class-rab-setup-rel-local-fail	PS Domain: Indicates the total number of Relocation Command message transmitted for Conversational Class for RAB Setup/Release Local Failure. Trigger: When Relocation Command message is transmitted by HNB-GW for Conversational Class for RAB Setup/Release Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-reloc-stream-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Streaming Class for RAB Setup. Trigger: When Relocation Command message is transmitted by HNB-GW for Streaming Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-stream-class-rab-rel-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Streaming Class for RAB Release. Trigger: When Relocation Command message is transmitted by HNB-GW for Streaming Class for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-stream-class-rab-setup-rel-local-fail	PS Domain: Indicates the total number of Relocation Command message transmitted for Streaming Class for RAB Setup/Release Local Failure. Trigger: When Relocation Command message is transmitted by HNB-GW for Streaming Class for RAB Setup/Release Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-inter-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Interactive Class for RAB Setup. Trigger: When Relocation Command message is transmitted by HNB-GW for Interactive Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-inter-class-rab-rel-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Interactive Class for RAB Release. Trigger: When Relocation Command message is transmitted by HNB-GW for Interactive Class for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-inter-class-rab-setup-rel-local-fail	PS Domain: Indicates the total number of Relocation Command message transmitted for Interactive Class for RAB Setup/Release Local Failure. Trigger: When Relocation Command message is transmitted by HNB-GW for Interactive Class for RAB Setup/Release Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-back-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Background Class for RAB Setup. Trigger: When Relocation Command message is transmitted by HNB-GW for Background Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-back-class-rab-rel-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Background Class for RAB Release. Trigger: When Relocation Command message is transmitted by HNB-GW for Background Class for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-back-class-rab-setup-rel-local-fail	PS Domain: Indicates the total number of Relocation Command message transmitted for Background Class for RAB Setup/Release Local Failure. Trigger: When Relocation Command message is transmitted by HNB-GW for Background Class for RAB Setup/Release Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-reloc-unkwn-class-rab-setup-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Unknown Class for RAB Setup. Trigger: When Relocation Command message is transmitted by HNB-GW for Unknown Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-unkwn-class-rab-rel-tx	PS Domain: Indicates the total number of Relocation Command message transmitted for Unknown Class for RAB Release. Trigger: When Relocation Command message is transmitted by HNB-GW for Unknown Class for RAB Release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-reloc-unkwn-class-rab-setup-rel-lcl-fail	PS Domain: Indicates the total number of Relocation Command message transmitted for Unknown Class for RAB Setup/Release Local Failure. Trigger: When Relocation Command message is transmitted by HNB-GW for Unknown Class for RAB Setup/Release Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-srms-ctx-req-tx	PS Domain: Indicates the total number of SRNS Context Request message transmitted. Trigger: When SRNS Context Request message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-srms-ctx-rsp-rx	PS Domain: Indicates the total number of SRNS Context Response message received. Trigger: When SRNS Context Response message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-srms-data-fwd-cmd-tx	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
ps-srms-rab-setup-tx	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for RAB Setup. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-srms-rab-setup-local-fail	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for RAB Setup Local Failure. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for RAB Setup Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-srms-local-fail-invalid-rab-id	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Radio Network Layer Cause for Invalid Rab Id. Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Radio Network Layer Cause for Invalid Rab Id. Availability: Across all HNB-GW Services	Unsigned Int32
ps-srms-local-fail-interact-with-othr-proc	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Radio Network Layer Cause for Interaction With Other Proc. Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Radio Network Layer Cause for Interaction With Other Proc. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
ps-sms-local-fail-sig-trans-res-fail	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Transport Layer Cause for Sig Transport Resource Fail. Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Transport Layer Cause for Sig Transport Resource Fail. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-local-fail-iu-trans-conn-fail-to-estab	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Transport Layer Cause for Iu Transport Conn failed to Establish. Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Transport Layer Cause for Iu Transport Conn failed to Establish. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-local-fail-trans-syn-err	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Protocol Layer Cause for Transfer syntax error. Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-local-fail-abs-syn-err-ign	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Protocol Layer Cause for Abstract syntax error (Ignore). Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Abstract syntax error (Ignore). Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-local-fail-semantic-err	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Protocol Layer Cause for Semantic error. Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-local-fail-abs-syn-err-rej	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Protocol Layer Cause for Abstract syntax error (Reject). Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-local-fail-msg-not-comp	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Protocol Layer Cause for Msg not compatible with receiver state. Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-local-fail-falsely-construct-msg	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Protocol Layer Cause for Abstract syntax error (Falsely constructed msg). Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Protocol Layer Cause for Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-local-fail-no-res-available	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Miscellaneous Cause for No Resource Available. Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Miscellaneous Cause for No Resource Available. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-sms-local-fail- unspecified	PS Domain: Indicates the total number of RAB Setup Local Failure message transmitted for Miscellaneous Cause for Unspecified. Trigger: When RAB Setup Local Failure message is transmitted by HNB-GW for Miscellaneous Cause for Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-conv-class-rab- setup-rx	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Conversational Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Conversational Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-conv-class-rab- setup-local-fail	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Conversational Class for RAB Setup/Local Failure. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Conversational Class for RAB Setup/Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-stream-class-rab- setup-rx	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Streaming Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Streaming Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-stream-class-rab- setup-local-fail	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Streaming Class for RAB Setup/Local Failure. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Streaming Class for RAB Setup/Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-inter-class-rab- setup-rx	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Interactive Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Interactive Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-inter-class-rab- setup-local-fail	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Interactive Class for RAB Setup/Local Failure. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Interactive Class for RAB Setup/Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-back-class-rab- setup-rx	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Background Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Background Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-back-class-rab- setup-local-fail	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Background Class for RAB Setup/Local Failure. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Background Class for RAB Setup/Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-sms-unkwn-class-rab-setup-rx	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Unknown Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Unknown Class for RAB Setup. Availability: Across all HNB-GW Services	Unsigned Int32
ps-sms-unkwn-class-rab-setup-local-fail	PS Domain: Indicates the total number of SRNS Data Fwd Command message transmitted for Unknown Class for RAB Setup/Local Failure. Trigger: When SRNS Data Fwd Command message is transmitted by HNB-GW for Unknown Class for RAB Setup/Local Failure. Availability: Across all HNB-GW Services	Unsigned Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 31

HNBGW-RTP Schema Statistics

The HNBGW-RTP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 31. Bulk Statistic Variables in the HNBGW-RTP Schema

Variables	Description	Data Type
vpnname	The name of the context in which HNB-GW service is configured. This is a key variable.	String
vpnid	The identity number of the context in which HNB-GW service is configured. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
servname	The name of the HNB-GW service for which statistics are collected. This is a key variable.	String
rtp-uplink-pkts-rx	Indicates the total number of RTP Uplink Packets received. Trigger: When RTP Uplink Packets are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-uplink-pkts-good-rx	Indicates the total number of RTP Uplink Packets (good) received. Trigger: When RTP Uplink Packets (good) are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-uplink-byts-rx	Indicates the total number of RTP Uplink Bytes received. Trigger: When RTP Uplink Bytes are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-uplink-pkts-dropped	Indicates the total number of RTP Uplink Packets dropped. Trigger: When RTP Uplink Packets are dropped by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-uplink-pkts-drop-rab_not-in_conn_state	Indicates the total number of RTP Uplink Packets dropped with cause RAB not in CONNETED state. Trigger: When RTP Uplink Packets are dropped by HNB-GW with cause RAB not in CONNETED state. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-uplink-pkts-dropped-misc	Indicates the total number of RTP Uplink Packets dropped with cause Miscellaneous. Trigger: When RTP Uplink Packets are dropped by HNB-GW with cause Miscellaneous. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-uplink-byts-dropped	Indicates the total number of RTP Uplink Bytes dropped. Trigger: When RTP Uplink Bytes are dropped by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-uplink-byts-drop-rab_not-in_conn_state	Indicates the total number of RTP Uplink Bytes dropped with cause RAB not in CONNETED state. Trigger: When RTP Uplink Bytes are dropped with cause RAB not in CONNETED state. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-uplink-byts-dropped-misc	Indicates the total number of RTP Uplink Bytes dropped with cause Miscellaneous. Trigger: When RTP Uplink Bytes are dropped by HNB-GW with cause Miscellaneous. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-downlink-pkts-tx	Indicates the total number of RTP Downlink Packets transmitted. Trigger: When RTP Downlink Packets are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-downlink-byts-tx	Indicates the total number of RTP Downlink Bytes transmitted. Trigger: When RTP Downlink Bytes are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
rtcp-receiver-report-rx	Indicates the total number of RTCP Receiver Report received (From HNB). When RTCP Receiver Report are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-receiver-report-tx	Indicates the total number of RTCP Receiver Report transmitted (To HNB). When RTCP Receiver Report are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-sender-report-rx	Indicates the total number of RTCP Sender Report received (From HNB). When RTCP Sender Report are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-sender-report-tx	Indicates the total number of RTCP Sender Report transmitted (To HNB). When RTCP Sender Report are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-sdes-report-rx	Indicates the total number of RTCP SDES Report received. When RTCP SDES Report are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-sdes-report-tx	Indicates the total number of RTCP SDES Report transmitted. When RTCP SDES Report are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-bye-report-rx	Indicates the total number of RTCP BYE Report received. When RTCP BYE Report are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-app-report-rx	Indicates the total number of RTCP APP Report received. When RTCP APP Report are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-uplink-pkts-rx	Indicates the total number of RTCP Uplink Packets received. When RTCP Uplink Packets are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-uplink-byts-rx	Indicates the total number of RTCP Uplink Bytes received. When RTCP Uplink Bytes are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-uplink-pkts-dropped	Indicates the total number of RTCP Uplink Packets dropped. When RTCP Uplink Packets are dropped by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-uplink-pkts-drop-rab_not-in_conn_state	Indicates the total number of RTCP Uplink Packets dropped with cause RAB not in CONNETED state. When RTCP Uplink Packets are dropped by HNB-GW with cause RAB not in CONNETED state. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-uplink-pkts-dropped-misc	Indicates the total number of RTCP Uplink Packets dropped with cause Miscellaneous. When RTCP Uplink Packets are dropped by HNB-GW with cause Miscellaneous. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rtcp-uplink-byts-dropped	Indicates the total number of RTCP Uplink Bytes dropped. When RTCP Uplink Bytes are dropped by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-uplink-byts-drop-rab_not_in_conn_state	Indicates the total number of RTCP Uplink Bytes dropped with cause RAB not in CONNETED state. When RTCP Uplink Bytes are dropped by HNB-GW with cause RAB not in CONNETED state. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-uplink-byts-dropped-misc	Indicates the total number of RTCP Uplink Bytes dropped with cause Miscellaneous. When RTCP Uplink Bytes are dropped by HNB-GW with cause Miscellaneous. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-downlink-pkts-tx	Indicates the total number of RTCP Downlink Packets transmitted. When RTCP Downlink Packets are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtcp-downlink-byts-tx	Indicates the total number of RTCP Downlink Bytes transmitted. When RTCP Downlink Bytes are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-mux-uplink-pkts-rx	Indicates the total number of RTP-MUX Uplink Packets received. Trigger: When RTP-MUX Uplink Packets are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-mux-uplink-byts-rx	Indicates the total number of RTP-MUX Uplink Bytes received. Trigger: When RTP-MUX Uplink Bytes are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-mux-uplink-pkts-dropped	Indicates the total number of RTP-MUX Uplink Packets dropped. Trigger: When RTP-MUX Uplink Packets are dropped by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-mux-uplink-pkts-dropped-misc	Indicates the total number of RTP-MUX Uplink Packets dropped with cause Miscellaneous. Trigger: When RTP-MUX Uplink Packets are dropped by HNB-GW with cause Miscellaneous. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-mux-uplink-byts-dropped	Indicates the total number of RTP-MUX Uplink Bytes dropped. Trigger: When RTP-MUX Uplink Bytes are dropped by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-mux-uplink-byts-dropped-misc	Indicates the total number of RTP-MUX Uplink Bytes dropped with cause Miscellaneous. Trigger: When RTP-MUX Uplink Bytes are dropped by HNB-GW with cause Miscellaneous. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-mux-rtp-stream-rcvd	Indicates the total number of RTP-MUX RTP Stream received. Trigger: When RTP-MUX RTP Stream are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
rtp-mux-rtp-stream-dropped	Indicates the total number of RTP-MUX RTP Stream Dropped. Trigger: When RTP-MUX RTP Stream are Dropped by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rtp-mux-rtp-stream-dropped-misc	Indicates the total number of RTP-MUX RTP Stream Dropped with cause Miscellaneous. Trigger: When RTP-MUX RTP Stream are Dropped by HNB-GW with cause Miscellaneous. Availability: Across all HNB-GW Services	Unsigned Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 32

HNBGW-RUA Schema Statistics

The HNBGW-RUA schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 32. Bulk Statistic Variables in the HNBGW-RUA Schema

Variables	Description	Data Type
vpnname	Indicates the name of the context in which HNB-GW service is configured. This is a key variable.	String
vpnid	Indicates the identity number of the context in which HNB-GW service is configured. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
servname	Indicates the name of the HNB-GW service for which statistics are collected or displayed. This is a key variable.	String
cs-connect-rx	RUA CS Domain: Indicates the total number of Connect message received. Trigger: When RUA CS Domain Connect message is received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
cs-connect-rx-est-cause-emergency	RUA CS Domain: Indicates the total number of Connect message received with Establishment cause - Emergency Call. Trigger: When RUA CS Domain Connect message is received by HNB-GW with Establishment cause - Emergency Call. Availability: Across all HNB-GW Services	Unsigned Int32
cs-connect-rx-est-cause-normal	RUA CS Domain: Indicates the total number of Connect message received with Establishment cause - Normal. Trigger: When RUA CS Domain Connect message is received by HNB-GW with Establishment cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
cs-connect-tx	RUA CS Domain: Indicates the total number of Connect message transmitted. Trigger: When RUA CS Domain Connect message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
cs-dir-transfer-rx	RUA CS Domain: Indicates the total number of Direct Transfer message received. Trigger: When RUA CS Domain Direct Transfer message received. Availability: Across all HNB-GW Services	Unsigned Int32
cs-dir-transfer-tx	RUA CS Domain: Indicates the total number of Direct Transfer message transmitted. Trigger: When RUA CS Domain Direct Transfer message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received. Trigger: When RUA CS Domain Disconnect (with payload) message received. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-normal	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Radio Network Layer cause - Normal. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-connect-failed	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Radio Network Layer cause - Connect failed. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-nw-rel	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Radio Network Layer cause - Network release. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-disc-payload-rx-rnl-unspecified	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Radio Network Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-trans-res-unavailable	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Transport Layer cause - Transport resource unavailable. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-trans-unspecified	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Transport Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-trans-syn-err	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Transfer syntax error. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-abs-syn-err-rej	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-abs-syn-err-ign-notify	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-msg-not-comp	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Msg not compatible with receiver state. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-semantic-err	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Semantic error. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-prot-unspecified	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
cs-disc-payload-rx-falsely-construct-msg	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Abstract syntax error (Falsely constructed message). Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed message). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-processing-overload	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Miscellaneous cause - Processing Overload. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-hw-failure	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Miscellaneous cause - Hardware Failure. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-oam-intervention	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Miscellaneous cause - O&M Intervention. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-rx-misc-unspecified	RUA CS Domain: Indicates the total number of Disconnect (with payload) message received with Miscellaneous cause - Unspecified. Trigger: When RUA CS Domain Disconnect (with payload) message is received by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted. Trigger: When RUA CS Domain Disconnect (with payload) message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-normal	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Radio Network Layer cause - Normal. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-connect-failed	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Radio Network Layer cause - Connect failed. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-nw-rel	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Radio Network Layer cause - Network release. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-disc-payload-tx-ml-unspecified	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Radio Network Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-trans-res-unavailable	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Transport Layer cause - Transport resource unavailable. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-trans-unspecified	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Transport Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-trans-syn-err	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Transfer syntax error. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-abs-syn-err-rej	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-abs-syn-err-ign-notify	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-msg-not-comp	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Msg not compatible with receiver state. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-semantic-err	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Semantic error. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-prot-unspecified	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
cs-disc-payload-tx-falsely-construct-msg	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-processing-overload	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Miscellaneous cause - Processing Overload. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-hw-failure	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Miscellaneous cause - Hardware Failure. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-oam-intervention	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Miscellaneous cause - O&M Intervention. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-payload-tx-misc-unspecified	RUA CS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Miscellaneous cause - Unspecified. Trigger: When RUA CS Domain Disconnect (with payload) message is transmitted by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received. Trigger: When RUA CS Domain Disconnect (without payload) message received. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx-normal	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Radio Network Layer cause - Normal. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx-connect-failed	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Radio Network Layer cause - Connect failed. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx-nw-rel	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Radio Network Layer cause - Network release. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-disc-wo-payload-rx- rnl-unspecified	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Radio Network Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx- trans-res-unavailable	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Transport Layer cause - Transport resource unavailable. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx- trans-unspecified	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Transport Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx- trans-syn-err	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Transfer syntax error. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx- abs-syn-err-rej	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx- abs-syn-err-ign-notify	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx- msg-not-comp	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Msg not compatible without receiver state. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Msg not compatible without receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx- semantic-err	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Semantic error. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx- prot-unspecified	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
cs-disc-wo-payload-rx-falsely-construct-msg	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx-processing-overload	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Miscellaneous cause - Processing Overload. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx-hw-failure	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Miscellaneous cause - Hardware Failure. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx-oam-intervention	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Miscellaneous cause - O&M Intervention. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-rx-misc-unspecified	RUA CS Domain: Indicates the total number of Disconnect (without payload) message received with Miscellaneous cause - Unspecified. Trigger: When RUA CS Domain Disconnect (without payload) message is received by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted. Trigger: When RUA CS Domain Disconnect (without payload) message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-normal	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Radio Network Layer cause - Normal. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-connect-failed	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Radio Network Layer cause - Connect failed. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-nw-rel	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Radio Network Layer cause - Network release. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-disc-wo-payload-tx-ml-unspecified	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Radio Network Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-trans-res-unavailable	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Transport Layer cause - Transport resource unavailable. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-trans-unspecified	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Transport Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-trans-syn-err	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Transfer syntax error. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-abs-syn-err-rej	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-abs-syn-err-ign-notify	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-msg-not-comp	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Msg not compatible without receiver state. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Msg not compatible without receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-semantic-err	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Semantic error. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
cs-disc-wo-payload-tx-prot-unspecified	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Unspecified. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-falsely-construct-msg	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-processing-overload	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Miscellaneous cause - Processing Overload. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-hw-failure	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Miscellaneous cause - Hardware Failure. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-oam-intervention	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Miscellaneous cause - O&M Intervention. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
cs-disc-wo-payload-tx-misc-unspecified	RUA CS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Miscellaneous cause - Unspecified. Trigger: When RUA CS Domain Disconnect (without payload) message is transmitted by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-conn-less-trans-rx	RUA CS Domain: Indicates the total number of Connectionless Transfer message received. Trigger: When RUA CS Domain Connectionless Transfer message received. Availability: Across all HNB-GW Services	Unsigned Int32
cs-conn-less-trans-tx	RUA CS Domain: Indicates the total number of Connectionless Transfer message transmitted. Trigger: When RUA CS Domain Connectionless Transfer message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx	RUA CS Domain: Indicates the total number of Error Indication message received. Trigger: When RUA CS Domain Error Indication message received. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-err-ind-rx-normal	RUA CS Domain: Indicates the total number of Error Indication message received with Radio Network Layer cause - Normal. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-connect-failed	RUA CS Domain: Indicates the total number of Error Indication message received with Radio Network Layer cause - Connect failed. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-nw-rel	RUA CS Domain: Indicates the total number of Error Indication message received with Radio Network Layer cause - Network release. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-ml-unspecified	RUA CS Domain: Indicates the total number of Error Indication message received with Radio Network Layer cause - Unspecified. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-trans-res-unavailable	RUA CS Domain: Indicates the total number of Error Indication message received with Transport Layer cause - Transport resource unavailable. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-trans-unspecified	RUA CS Domain: Indicates the total number of Error Indication message received with Transport Layer cause - Unspecified. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-trans-syn-err	RUA CS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Transfer syntax error. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-abs-syn-err-rej	RUA CS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-abs-syn-err-ign-notify	RUA CS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
cs-err-ind-rx-msg-not-comp	RUA CS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Msg not compatible with receiver state. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-semantic-err	RUA CS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Semantic error. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-prot-unspecified	RUA CS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Unspecified. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-falsely-construct-msg	RUA CS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-processing-overload	RUA CS Domain: Indicates the total number of Error Indication message received with Miscellaneous cause - Processing Overload. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-hw-failure	RUA CS Domain: Indicates the total number of Error Indication message received with Miscellaneous cause - Hardware Failure. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-oam-intervention	RUA CS Domain: Indicates the total number of Error Indication message received with Miscellaneous cause - O&M Intervention. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-rx-misc-unspecified	RUA CS Domain: Indicates the total number of Error Indication message received with Miscellaneous cause - Unspecified. Trigger: When RUA CS Domain Error Indication message is received by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx	RUA CS Domain: Indicates the total number of Error Indication message transmitted. Trigger: When RUA CS Domain Error Indication message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
cs-err-ind-tx-normal	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Normal. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-connect-failed	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Connect failed. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-nw-rel	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Network release. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-rl-unspecified	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Unspecified. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-trans-res-unavailable	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Transport Layer cause - Transport resource unavailable. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-trans-unspecified	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Transport Layer cause - Unspecified. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-trans-syn-err	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Transfer syntax error. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-abs-syn-err-rej	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-abs-syn-err-ign-notify	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
cs-err-ind-tx-msg-not-comp	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Msg not compatible with receiver state. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-semantic-err	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Semantic error. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-prot-unspecified	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Unspecified. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-falsely-construct-msg	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-processing-overload	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Miscellaneous cause - Processing Overload. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-hw-failure	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Miscellaneous cause - Hardware Failure. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-oam-intervention	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Miscellaneous cause - O&M Intervention. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
cs-err-ind-tx-misc-unspecified	RUA CS Domain: Indicates the total number of Error Indication message transmitted with Miscellaneous cause - Unspecified. Trigger: When RUA CS Domain Error Indication message is transmitted by HNB - GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-connect-rx	RUA PS Domain: Indicates the total number of Connect message received. Trigger: When RUA PS Domain Connect message received. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-connect-rx-est-cause-emergency	RUA PS Domain: Indicates the total number of Connect message received with Establishment cause - Emergency Call. Trigger: When RUA PS Domain Connect message is received by HNB-GW with Establishment cause - Emergency Call. Availability: Across all HNB-GW Services	Unsigned Int32
ps-connect-rx-est-cause-normal	RUA PS Domain: Indicates the total number of Connect message received with Establishment cause - Normal. Trigger: When RUA PS Domain Connect message is received by HNB-GW with Establishment cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
ps-connect-tx	RUA PS Domain: Indicates the total number of Connect message transmitted. Trigger: When RUA PS Domain Connect message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
ps-dir-transfer-rx	RUA PS Domain: Indicates the total number of Direct Transfer message received. Trigger: When RUA PS Domain Direct Transfer message received. Availability: Across all HNB-GW Services	Unsigned Int32
ps-dir-transfer-tx	RUA PS Domain: Indicates the total number of Direct Transfer message transmitted. Trigger: When RUA PS Domain Direct Transfer message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received. Trigger: When RUA PS Domain Disconnect (with payload) message received. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-normal	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Radio Network Layer cause - Normal. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-connect-failed	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Radio Network Layer cause - Connect failed. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-nw-rel	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Radio Network Layer cause - Network release. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-ntl-unspecified	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Radio Network Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
ps-disc-payload-rx-trans-res-unavailable	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Transport Layer cause - Transport resource unavailable. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-trans-unspecified	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Transport Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-trans-syn-err	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Transfer syntax error. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-abs-syn-err-rej	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-abs-syn-err-ign-notify	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-msg-not-comp	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Msg not compatible with receiver state. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-semantic-err	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Semantic error. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-prot-unspecified	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-falsely-construct-msg	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-disc-payload-rx-processing-overload	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Miscellaneous cause - Processing Overload. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-hw-failure	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Miscellaneous cause - Hardware Failure. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-oam-intervention	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Miscellaneous cause - O&M Intervention. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-rx-misc-unspecified	RUA PS Domain: Indicates the total number of Disconnect (with payload) message received with Miscellaneous cause - Unspecified. Trigger: When RUA PS Domain Disconnect (with payload) message is received by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted. Trigger: When RUA PS Domain Disconnect (with payload) message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-normal	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Radio Network Layer cause - Normal. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-connect-failed	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Radio Network Layer cause - Connect failed. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-nw-rel	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Radio Network Layer cause - Network release. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-rnl-unspecified	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Radio Network Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
ps-disc-payload-tx-trans-res-unavailable	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Transport Layer cause - Transport resource unavailable. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-trans-unspecified	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Transport Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-trans-syn-err	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Transfer syntax error. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-abs-syn-err-rej	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-abs-syn-err-ign-notify	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-msg-not-comp	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Msg not compatible with receiver state. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-semantic-err	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Semantic error. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-prot-unspecified	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-falsely-construct-msg	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-disc-payload-tx-processing-overload	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Miscellaneous cause - Processing Overload. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-hw-failure	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Miscellaneous cause - Hardware Failure. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-oam-intervention	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Miscellaneous cause - O&M Intervention. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-payload-tx-misc-unspecified	RUA PS Domain: Indicates the total number of Disconnect (with payload) message transmitted with Miscellaneous cause - Unspecified. Trigger: When RUA PS Domain Disconnect (with payload) message is transmitted by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received. Trigger: When RUA PS Domain Disconnect (without payload) message received. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-normal	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Radio Network Layer cause - Normal. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-connect-failed	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Radio Network Layer cause - Connect failed. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-nw-rel	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Radio Network Layer cause - Network release. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-rnl-unspecified	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Radio Network Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
ps-disc-wo-payload-rx-trans-res-unavailable	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Transport Layer cause - Transport resource unavailable. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-trans-unspecified	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Transport Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-trans-syn-err	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Transfer syntax error. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-abs-syn-err-rej	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-abs-syn-err-ign-notify	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-msg-not-comp	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Msg not compatible without receiver state. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Msg not compatible without receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-semantic-err	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Semantic error. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-prot-unspecified	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-disc-wo-payload-rx-falsely-construct-msg	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Protocol Layer cause - Abstract syntax error (Falsely constructed msg. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-processing-overload	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Miscellaneous cause - Processing Overload. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-hw-failure	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Miscellaneous cause - Hardware Failure. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-oam-intervention	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Miscellaneous cause - O&M Intervention. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-rx-misc-unspecified	RUA PS Domain: Indicates the total number of Disconnect (without payload) message received with Miscellaneous cause - Unspecified. Trigger: When RUA PS Domain Disconnect (without payload) message is received by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted. Trigger: When RUA PS Domain Disconnect (without payload) message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx-normal	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Radio Network Layer cause - Normal. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx-connect-failed	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Radio Network Layer cause - Connect failed. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx-nw-rel	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Radio Network Layer cause - Network release. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
ps-disc-wo-payload-tx- rnl-unspecified	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Radio Network Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx- trans-res-unavailable	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Transport Layer cause - Transport resource unavailable. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx- trans-unspecified	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Transport Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx- trans-syn-err	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Transfer syntax error. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx- abs-syn-err-rej	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx- abs-syn-err-ign-notify	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx- msg-not-comp	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Msg not compatible without receiver state. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Msg not compatible without receiver state. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx- semantic-err	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Semantic error. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx- prot-unspecified	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Unspecified. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-disc-wo-payload-tx-falsely-construct-msg	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Protocol Layer cause - Abstract syntax error (Falsely constructed msg. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx-processing-overload	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Miscellaneous cause - Processing Overload. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx-hw-failure	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Miscellaneous cause - Hardware Failure. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx-oam-intervention	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Miscellaneous cause - O&M Intervention. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
ps-disc-wo-payload-tx-misc-unspecified	RUA PS Domain: Indicates the total number of Disconnect (without payload) message transmitted with Miscellaneous cause - Unspecified. Trigger: When RUA PS Domain Disconnect (without payload) message is transmitted by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-conn-less-trans-rx	RUA PS Domain: Indicates the total number of Connectionless Transfer message transmitted. Trigger: When RUA PS Domain Connectionless Transfer message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
ps-conn-less-trans-tx	RUA PS Domain: Indicates the total number of Connectionless Transfer message transmitted. Trigger: When RUA PS Domain Connectionless Transfer message transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx	RUA PS Domain: Indicates the total number of Error Indication message received. Trigger: When RUA PS Domain Error Indication message received. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-normal	RUA PS Domain: Indicates the total number of Error Indication message received with Radio Network Layer cause - Normal. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-err-ind-rx-connect-failed	RUA PS Domain: Indicates the total number of Error Indication message received with Radio Network Layer cause - Connect failed. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-nw-rel	RUA PS Domain: Indicates the total number of Error Indication message received with Radio Network Layer cause - Network release. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-ml-unspecified	RUA PS Domain: Indicates the total number of Error Indication message received with Radio Network Layer cause - Unspecified. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-trans-res-unavailable	RUA PS Domain: Indicates the total number of Error Indication message received with Transport Layer cause - Transport resource unavailable. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-trans-unspecified	RUA PS Domain: Indicates the total number of Error Indication message received with Transport Layer cause - Unspecified. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-trans-syn-err	RUA PS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Transfer syntax error. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-abs-syn-err-rej	RUA PS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-abs-syn-err-ign-notify	RUA PS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-msg-not-comp	RUA PS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Msg not compatible with receiver state. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-err-ind-rx-semantic-err	RUA PS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Semantic error. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-prot-unspecified	RUA PS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Unspecified. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-falsely-construct-msg	RUA PS Domain: Indicates the total number of Error Indication message received with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-processing-overload	RUA PS Domain: Indicates the total number of Error Indication message received with Miscellaneous cause - Processing Overload. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-hw-failure	RUA PS Domain: Indicates the total number of Error Indication message received with Miscellaneous cause - Hardware Failure. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-oam-intervention	RUA PS Domain: Indicates the total number of Error Indication message received with Miscellaneous cause - O&M Intervention. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-rx-misc-unspecified	RUA PS Domain: Indicates the total number of Error Indication message received with Miscellaneous cause - Unspecified. Trigger: When RUA PS Domain Error Indication message is received by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx	RUA PS Domain: Indicates the total number of Error Indication message transmitted. Trigger: When RUA PS Domain Error Indication message is transmitted. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-normal	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Normal. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Normal. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
ps-err-ind-tx-connect-failed	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Connect failed. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Connect failed. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-nw-rel	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Network release. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Network release. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-ml-unspecified	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Radio Network Layer cause - Unspecified. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Radio Network Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-trans-res-unavailable	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Transport Layer cause - Transport resource unavailable. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Transport Layer cause - Transport resource unavailable. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-trans-unspecified	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Transport Layer cause - Unspecified. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Transport Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-trans-syn-err	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Transfer syntax error. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Transfer syntax error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-abs-syn-err-rej	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Abstract syntax error (Reject). Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Reject). Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-abs-syn-err-ign-notify	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Ignore and Notify). Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-msg-not-comp	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Msg not compatible with receiver state. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Msg not compatible with receiver state. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
ps-err-ind-tx-semantic-err	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Semantic error. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Semantic error. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-prot-unspecified	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Unspecified. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-falsely-construct-msg	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Protocol Layer cause - Abstract syntax error (Falsely constructed msg). Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-processing-overload	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Miscellaneous cause - Processing Overload. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Miscellaneous cause - Processing Overload. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-hw-failure	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Miscellaneous cause - Hardware Failure. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Miscellaneous cause - Hardware Failure. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-oam-intervention	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Miscellaneous cause - O&M Intervention. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Miscellaneous cause - O&M Intervention. Availability: Across all HNB-GW Services	Unsigned Int32
ps-err-ind-tx-misc-unspecified	RUA PS Domain: Indicates the total number of Error Indication message transmitted with Miscellaneous cause - Unspecified. Trigger: When RUA PS Domain Error Indication message is transmitted by HNB-GW with Miscellaneous cause - Unspecified. Availability: Across all HNB-GW Services	Unsigned Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 33

HNBGW-SCTP Schema Statistics

The HNBGW-SCTP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.



Important: Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 33. Bulk Statistic Variables in the HNBGW-SCTP Schema

Variables	Description	Data Type
vpnname	Indicates the name of the context in which HNB-GW service is configured. This is a key variable.	String
vpnid	Indicates the identity number of the context in which HNB-GW service is configured. This is a key variable.	String

Variables	Description	Data Type
servname	Indicates the name of the HNB-GW service for which statistics are collected. This is a key variable.	String
trans-sctp-data-init-chunks	Indicates the total number of SCTP packets transmitted for Init Chunks. Trigger: Increases when SCTP Data for Init Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-init-ack-chunks	Indicates the total number of SCTP packets transmitted for Init Ack Chunks. Trigger: Increases when SCTP Data for Init Ack Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-shutdown-chunks	Indicates the total number of SCTP packets transmitted for Shutdown Chunks. Trigger: Increases when SCTP Data for Shutdown Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-shutdown-ack-chunks	Indicates the total number of SCTP packets transmitted for Shutdown Ack Chunks. Trigger: Increases when SCTP Data for Shutdown Ack Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-cookie-chunks	Indicates the total number of SCTP packets transmitted for Cookie Chunks. Trigger: Increases when SCTP Data for Cookie Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-cookie-ack-chunks	Indicates the total number of SCTP packets transmitted for Cookie Ack Chunks. Trigger: Increases when SCTP Data for Cookie Ack Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-data-chunks	Indicates the total number of SCTP packets transmitted for Data Chunks. Trigger: Increases when SCTP Data for Data Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-data-ack-chunks	Indicates the total number of SCTP packets transmitted for Data Ack Chunks. Trigger: Increases when SCTP Data for Data Ack Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-shutdown-comp-chunks	Indicates the total number of SCTP packets transmitted for Shutdown Complete Chunks. Trigger: Increases when SCTP Data for Shutdown Complete Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-heartbeat-chunks	Indicates the total number of SCTP packets transmitted for Heartbeat Chunks. Trigger: Increases when SCTP Data for Heartbeat Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
trans-sctp-data-heartbeat-ack-chunks	Indicates the total number of SCTP packets transmitted for HeartBeat Ack Chunks. Trigger: Increases when SCTP Data for HeartBeat Ack Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-abort-chunks	Indicates the total number of SCTP packets transmitted for Abort Chunks. Trigger: Increases when SCTP Data for Abort Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
trans-sctp-data-error-chunks	Indicates the total number of SCTP packets transmitted for Error Chunks. Trigger: Increases when SCTP Data for Error Chunks are transmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-init-chunks	Indicates the total number of SCTP packets received for Init Chunks. Trigger: Increases when SCTP Data for Init Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-init-ack-chunks	Indicates the total number of SCTP packets received for Init Ack Chunks. Trigger: Increases when SCTP Data for Init Ack Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-shutdown-chunks	Indicates the total number of SCTP packets received for Shutdown Chunks. Trigger: Increases when SCTP Data for Shutdown Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-shutdown-ack-chunks	Indicates the total number of SCTP packets received for Shutdown Ack Chunks. Trigger: Increases when SCTP Data for Shutdown Ack Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-cookie-chunks	Indicates the total number of SCTP packets received for Cookie Chunks. Trigger: Increases when SCTP Data for Cookie Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-cookie-ack-chunks	Indicates the total number of SCTP packets received for Cookie Ack Chunks. Trigger: Increases when SCTP Data for Cookie Ack Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-data-chunks	Indicates the total number of SCTP packets received for Data Chunks. Trigger: Increases when SCTP Data for Data Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-data-ack-chunks	Indicates the total number of SCTP packets received for Data Ack Chunks. Trigger: Increases when SCTP Data for Data Ack Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rcvd-sctp-data-shutdown-comp-chunks	Indicates the total number of SCTP packets received for Shutdown Complete Chunks. Trigger: Increases when SCTP Data for Shutdown Complete Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-heartbeat-chunks	Indicates the total number of SCTP packets received for Heartbeat Chunks. Trigger: Increases when SCTP Data for Heartbeat Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-heartbeat-ack-chunks	Indicates the total number of SCTP packets received for HeartBeat Ack Chunks. Trigger: Increases when SCTP Data for HeartBeat Ack Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-abort-chunks	Indicates the total number of SCTP packets received for Abort Chunks. Trigger: Increases when SCTP Data for Abort Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
rcvd-sctp-data-error-chunks	Indicates the total number of SCTP packets received for Error Chunks. Trigger: Increases when SCTP Data for Error Chunks are received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
retrans-sctp-data-init-chunks	Indicates the total number of SCTP packets retransmitted for Init Chunks. Trigger: Increases when SCTP Data for Init Chunks are retransmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
retrans-sctp-data-shutdown-chunks	Indicates the total number of SCTP packets retransmitted for Shutdown Chunks. Trigger: Increases when SCTP Data for Shutdown Chunks are retransmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
retrans-sctp-data-shutdown-ack-chunks	Indicates the total number of SCTP packets retransmitted for Shutdown Ack Chunks. Trigger: Increases when SCTP Data for Shutdown Ack Chunks are retransmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
retrans-sctp-data-data-chunks	Indicates the total number of SCTP packets retransmitted for Data Chunks. Trigger: Increases when SCTP Data for Data Chunks are retransmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
retrans-sctp-data-cookie-chunks	Indicates the total number of SCTP packets retransmitted for Cookie Chunks. Trigger: Increases when SCTP Data for Cookie Chunks are retransmitted by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
total-bytes-sent-to-lower-layer	Indicates the total number of SCTP bytes sent to the lower layer. Trigger: Increases when bytes sent to lower layer by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32

Variables	Description	Data Type
total-bytes-rcvd-from-lower-layer	Indicates the total number of SCTP bytes received from lower layer. Trigger: Increases when bytes from lower layer received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
total-packets-sent-to-lower-layer	Indicates the total number of SCTP packets sent to the lower layer. Trigger: Increases when packets sent to lower layer by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32
total-packets-rcvd-from-lower-layer	Indicates the total number of SCTP packets received from lower layer. Trigger: Increases when packets from lower layer received by HNB-GW. Availability: Across all HNB-GW Services	Unsigned Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 34

HSGW Schema Statistics

The HSGW schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HSGW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 34. Bulk Statistic Variables in the HSGW Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the HSGW service. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the HSGW service. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	Displays the name of the HSGW service for which the statistics are displayed. This is a key variable. Type: Information	String
servid	The identification number of the service configured on the system that is currently facilitating the HSGW service. This is an internal reference number. This is a key variable. Type: Information	Int32
sessstat-totcur-ue	Session Statistics - Total Current - UE Active Type: Gauge	Int32
sessstat-totcur-pdn	Session Statistics - Total Current - PDN Type: Gauge	Int32
sessstat-totcur-bearers	Session Statistics - Total Current - Bearers Type: Gauge	Int32
sessstat-totsetup-ue	Session Statistics - Total Setup - UE Type: Counter	Int32
sessstat-totsetup-pdn	Session Statistics - Total Setup - PDN Type: Counter	Int32
sessstat-totsetup-bearers	Session Statistics - Total Setup - Bearers Type: Counter	Int32
sessstat-pdnsetuptype-ipv4	Session Statistics - Total PDNs Setup Per PDN-type - IPv4 Type: Counter	Int32
sessstat-pdnsetuptype-ipv4v6	Session Statistics - Total PDNs Setup Per PDN-type - IPv4v6 Type: Counter	Int32
sessstat-pdnrel-ipv4	Session Statistics - Total PDNs Released - IPv4 Type: Counter	Int32
sessstat-pdnrel-ipv6	Session Statistics - Total PDNs Released - IPv6 Type: Counter	Int32
sessstat-pdnrel-ipv4v6	Session Statistics - Total PDNs Released - IPv4v6 Type: Counter	Int32
sessstat-pdnrelrsn-pcf	Session Statistics - Total PDNs Released Reason - PCFMME Ini Type: Counter	Int32
sessstat-pdnrelrsn-pgw	Session Statistics - Total PDNs Released Reason - PGW Ini Type: Counter	Int32
sessstat-pdnrelrsn-pcrf	Session Statistics - Total PDNs Released Reason - PCRF Ini Type: Counter	Int32

Variables	Description	Data Type
sessstat-pdnrelnsn-local	Session Statistics - Total PDNs Released Reason -Local Type: Counter	Int32
sessstat-pdnrelnsn-other	Session Statistics - Total PDNs Released Reason -Other Type: Counter	Int32
sessstat-pdnrej-ipv4	Session Statistics - Total PDNs Rejected - IPv4 Type: Counter	Int32
sessstat-pdnrej-ipv6	Session Statistics - Total PDNs Rejected - IPv6 Type: Counter	Int32
sessstat-pdnrej-ipv4v6	Session Statistics - Total PDNs Rejected - IPv4v6 Type: Counter	Int32
sessstat-pdnrejrnsn-pgw	Session Statistics - Total PDNs Rejected Reason - PGW Reject Type: Counter	Int32
sessstat-pdnrejrnsn-apnauth	Session Statistics - Total PDNs Rejected Reason - APN Auth Failure License Type: Counter	Int32
sessstat-pdnrejrnsn-other	Session Statistics - Total PDNs Rejected Reason - OtherNewcall Policy Type: Counter	Int32
sessstat-pdnrejrnsn-pgwrej	Session Statistics - Total PDNs Rejected Reason - No PGW AvailableOverload Type: Counter	Int32
sessstat-pdnrejrnsn-pdnexists	Session Statistics - Total PDNs Rejected Reason - PDN Already ExisCongestion Type: Counter	Int32
sessstat-pdnrejrnsn-adminrej	Session Statistics - Total PDNs Rejected Reason - Admin Prohibited Type: Counter	Int32
sessstat-pdnrejrnsn-limitexceed	Session Statistics - Total PDNs Rejected Reason - PDN Limit ExceededOther Type: Counter	Int32
sessstat-pdnrejrnsn-unreach	Session Statistics - Total PDNs Rejected Reason - PDN GW Unreachable Type: Counter	Int32
sessstat-pdnrejrnsn-rscunavail	Session Statistics - Total PDNs Rejected Reason - Resource Unavailable Type: Counter	Int32
sessstat-pdnrejrnsn-sublimit	Session Statistics - Total PDNs Rejected Reason - Subscription Limitation Type: Counter	Int32
sessstat-totinter-ho	Session Statistics - HandOffStatistics - Total Inter HSGW HO Type: Counter	Int32
sessstat-totintra-ho	Session Statistics - HandOffStatistics - Total Intra HSGW HO Type: Counter	Int32
sessstat-active	Session Statistics - HandOffStatistics - Active Type: Counter	Int32
sessstat-dormant	Session Statistics - HandOffStatistics - Dormant Type: Counter	Int32

Variables	Description	Data Type
sessstat-a10s-totcur	Session Statistics - A10 Statistics - Total A10s Current Type: Counter	Int32
sessstat-a10s-maincur	Session Statistics - A10 Statistics - Main A10s Current Type: Counter	Int32
sessstat-a10s-auxcur	Session Statistics - A10 Statistics - Aux A10s Current Type: Counter	Int32
sessstat-a10s-totsetup	Session Statistics - A10 Statistics - Total A10s Setup Type: Counter	Int32
sessstat-a10s-mainsetup	Session Statistics - A10 Statistics - Main A10s Setup Type: Counter	Int32
sessstat-a10s-auxsetup	Session Statistics - A10 Statistics - Aux A10s Setup Type: Counter	Int32
sessstat-a10s-totrel	Session Statistics - A10 Statistics - Total A10s Released Type: Counter	Int32
sessstat-a10s-mainrel	Session Statistics - A10 Statistics - Main A10s Released Type: Counter	Int32
sessstat-a10s-auxrel	Session Statistics - A10 Statistics - Aux A10s Released Type: Counter	Int32
totepsbearsetup-qci1	Total EPS Bearers Setup - QCI 1 Type: Counter	Int32
totepsbearsetup-qci2	Total EPS Bearers Setup - QCI 2 Type: Counter	Int32
totepsbearsetup-qci3	Total EPS Bearers Setup - QCI 3 Type: Counter	Int32
totepsbearsetup-qci4	Total EPS Bearers Setup - QCI 4 Type: Counter	Int32
totepsbearsetup-qci5	Total EPS Bearers Setup - QCI 5 Type: Counter	Int32
totepsbearsetup-qci6	Total EPS Bearers Setup - QCI 6 Type: Counter	Int32
totepsbearsetup-qci7	Total EPS Bearers Setup - QCI 7 Type: Counter	Int32
totepsbearsetup-qci8	Total EPS Bearers Setup - QCI 8 Type: Counter	Int32
totepsbearsetup-qci9	Total EPS Bearers Setup - QCI 9 Type: Counter	Int32
totepsbearsetup-other	Total EPS Bearers Setup - Other Type: Counter	Int32

Variables	Description	Data Type
totepsbearrel-qci1	Total EPS Bearers Released - QCI 1 Type: Counter	Int32
totepsbearrel-qci2	Total EPS Bearers Released - QCI 2 Type: Counter	Int32
totepsbearrel-qci3	Total EPS Bearers Released - QCI 3 Type: Counter	Int32
totepsbearrel-qci4	Total EPS Bearers Released - QCI 4 Type: Counter	Int32
totepsbearrel-qci5	Total EPS Bearers Released - QCI 5 Type: Counter	Int32
totepsbearrel-qci6	Total EPS Bearers Released - QCI 6 Type: Counter	Int32
totepsbearrel-qci7	Total EPS Bearers Released - QCI 7 Type: Counter	Int32
totepsbearrel-qci8	Total EPS Bearers Released - QCI 8 Type: Counter	Int32
totepsbearrel-qci9	Total EPS Bearers Released - QCI 9 Type: Counter	Int32
totepsbearrel-other	Total EPS Bearers Released - Other Type: Counter	Int32
totepsbearmod-qci1	Total EPS Bearers Modified - QCI 1 Type: Counter	Int32
totepsbearmod-qci2	Total EPS Bearers Modified - QCI 2 Type: Counter	Int32
totepsbearmod-qci3	Total EPS Bearers Modified - QCI 3 Type: Counter	Int32
totepsbearmod-qci4	Total EPS Bearers Modified - QCI 4 Type: Counter	Int32
totepsbearmod-qci5	Total EPS Bearers Modified - QCI 5 Type: Counter	Int32
totepsbearmod-qci6	Total EPS Bearers Modified - QCI 6 Type: Counter	Int32
totepsbearmod-qci7	Total EPS Bearers Modified - QCI 7 Type: Counter	Int32
totepsbearmod-qci8	Total EPS Bearers Modified - QCI 8 Type: Counter	Int32
totepsbearmod-qci9	Total EPS Bearers Modified - QCI 9 Type: Counter	Int32

Variables	Description	Data Type
totepsbearmod-other	Total EPS Bearers Modified - Other Type: Counter	Int32
totepsbearrelrsn-pgw	Total EPS Bearers Released - Total Dedicated Bearers Released Reason - PGW Ini Type: Counter	Int32
totepsbearrelrsn-pcrf	Total EPS Bearers Released - Total Dedicated Bearers Released Reason - PCRF Ini Type: Counter	Int32
totepsbearrelrsn-hsgw	Total EPS Bearers Released - Total Dedicated Bearers Released Reason - HSGW IniS1 Error Ind Type: Counter	Int32
totepsbearrelrsn-pdn	Total EPS Bearers Released - Total Dedicated Bearers Released Reason - PDN DownS5 Error Ind Type: Counter	Int32
totepsbearrelrsn-other	Total EPS Bearers Released - Total Dedicated Bearers Released Reason - Other Type: Counter	Int32
datastat-uplink-qci1totbyte	Data Statistics - Uplink Statistics - QCI 1 Total-Bytes Type: Counter	Int64
datastat-uplink-qci1totpkt	Data Statistics - Uplink Statistics - QCI 1 Total-Packets Type: Counter	Int64
datastat-uplink-qci2totbyte	Data Statistics - Uplink Statistics - QCI 2 Total-Bytes Type: Counter	Int64
datastat-uplink-qci2totpkt	Data Statistics - Uplink Statistics - QCI 2 Total-Packets Type: Counter	Int64
datastat-uplink-qci3totbyte	Data Statistics - Uplink Statistics - QCI 3 Total-Bytes Type: Counter	Int64
datastat-uplink-qci3totpkt	Data Statistics - Uplink Statistics - QCI 3 Total-Packets Type: Counter	Int64
datastat-uplink-qci4totbyte	Data Statistics - Uplink Statistics - QCI 4 Total-Bytes Type: Counter	Int64
datastat-uplink-qci4totpkt	Data Statistics - Uplink Statistics - QCI 4 Total-Packets Type: Counter	Int64
datastat-uplink-qci5totbyte	Data Statistics - Uplink Statistics - QCI 5 Total-Bytes Type: Counter	Int64
datastat-uplink-qci5totpkt	Data Statistics - Uplink Statistics - QCI 5 Total-Packets Type: Counter	Int64
datastat-uplink-qci6totbyte	Data Statistics - Uplink Statistics - QCI 6 Total-Bytes Type: Counter	Int64
datastat-uplink-qci6totpkt	Data Statistics - Uplink Statistics - QCI 6 Total-Packets Type: Counter	Int64

Variables	Description	Data Type
datastat-uplink-qci7totbyte	Data Statistics - Uplink Statistics - QCI 7 Total-Bytes Type: Counter	Int64
datastat-uplink-qci7totpkt	Data Statistics - Uplink Statistics - QCI 7 Total-Packets Type: Counter	Int64
datastat-uplink-qci8totbyte	Data Statistics - Uplink Statistics - QCI 8 Total-Bytes Type: Counter	Int64
datastat-uplink-qci8totpkt	Data Statistics - Uplink Statistics - QCI 8 Total-Packets Type: Counter	Int64
datastat-uplink-qci9totbyte	Data Statistics - Uplink Statistics - QCI 9 Total-Bytes Type: Counter	Int64
datastat-uplink-qci9totpkt	Data Statistics - Uplink Statistics - QCI 9 Total-Packets Type: Counter	Int64
datastat-uplink-othertotbyte	Data Statistics - Uplink Statistics - Other Total-Bytes Type: Counter	Int64
datastat-uplink-othertotpkt	Data Statistics - Uplink Statistics - Other Total-Packets Type: Counter	Int64
datastat-downlink-qci1totbyte	Data Statistics - Downlink Statistics - QCI 1 Total-Bytes Type: Counter	Int64
datastat-downlink-qci1totpkt	Data Statistics - Downlink Statistics - QCI 1 Total-Packets Type: Counter	Int64
datastat-downlink-qci2totbyte	Data Statistics - Downlink Statistics - QCI 2 Total-Bytes Type: Counter	Int64
datastat-downlink-qci2totpkt	Data Statistics - Downlink Statistics - QCI 2 Total-Packets Type: Counter	Int64
datastat-downlink-qci3totbyte	Data Statistics - Downlink Statistics - QCI 3 Total-Bytes Type: Counter	Int64
datastat-downlink-qci3totpkt	Data Statistics - Downlink Statistics - QCI 3 Total-Packets Type: Counter	Int64
datastat-downlink-qci4totbyte	Data Statistics - Downlink Statistics - QCI 4 Total-Bytes Type: Counter	Int64
datastat-downlink-qci4totpkt	Data Statistics - Downlink Statistics - QCI 4 Total-Packets Type: Counter	Int64
datastat-downlink-qci5totbyte	Data Statistics - Downlink Statistics - QCI 5 Total-Bytes Type: Counter	Int64
datastat-downlink-qci5totpkt	Data Statistics - Downlink Statistics - QCI 5 Total-Packets Type: Counter	Int64
datastat-downlink-qci6totbyte	Data Statistics - Downlink Statistics - QCI 6 Total-Bytes Type: Counter	Int64

Variables	Description	Data Type
datastat-downlink-qci6totpkt	Data Statistics - Downlink Statistics - QCI 6 Total-Packets Type: Counter	Int64
datastat-downlink-qci7totbyte	Data Statistics - Downlink Statistics - QCI 7 Total-Bytes Type: Counter	Int64
datastat-downlink-qci7totpkt	Data Statistics - Downlink Statistics - QCI 7 Total-Packets Type: Counter	Int64
datastat-downlink-qci8totbyte	Data Statistics - Downlink Statistics - QCI 8 Total-Bytes Type: Counter	Int64
datastat-downlink-qci8totpkt	Data Statistics - Downlink Statistics - QCI 8 Total-Packets Type: Counter	Int64
datastat-downlink-qci9totbyte	Data Statistics - Downlink Statistics - QCI 9 Total-Bytes Type: Counter	Int64
datastat-downlink-qci9totpkt	Data Statistics - Downlink Statistics - QCI 9 Total-Packets Type: Counter	Int64
datastat-downlink-othertotbyte	Data Statistics - Downlink Statistics - Other Total-Bytes Type: Counter	Int64
datastat-downlink-othertotpkt	Data Statistics - Downlink Statistics - Other Total-Packets Type: Counter	Int64
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 35

IMSA Schema Statistics

The IMSA schema provides operational statistics that can be used for monitoring and troubleshooting Gx, Gxx, and Ty interface functionality used by the following products: GGSN, HA, HSGW, IPSG, PDSN, P-GW, S-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 35. Bulk Statistic Variables in the IMSA Schema

Variables	Description	Data Type

Variables	Description	Data Type
vpnnname	Description: The name of the context configured on the system that is currently facilitating the IMS Authorization service. This is a key variable. Availability: Per system Type: Information	String
vpnid	Description: The identification number of the context configured on the system that is currently facilitating the IMS Authorization service. This is an internal reference number. This is a key variable. Availability: Per system Type: Information	Int32
servname	Description: The name of the IMS Authorization service for which the statistics are displayed. This is a key variable. Availability: Per system Type: Information	String
servid	Description: The identification number of the service configured on the system that is currently facilitating the IMS Authorization service. This is an internal reference number. This is a key variable. Availability: Per system Type: Information	Int32
dpca-cursess	Description: The total number of DPCA sessions currently active on this system. Triggers: Increments when DPCA session is created Decrements when DPCA session is terminated Availability: Per IMS authorization service Type: Gauge	Int32
dpca-imsaadd	Description: The total number of DPCA sessions created. Triggers: Increments when DPCA receives a create request Availability: Per IMS authorization service	Int32
dpca-start	Description: The total number of CCR Initial request messages sent. Triggers: Increments whenever CCR-I message is sent Availability: Per IMS authorization service	Int32
dpca-seccreate	Description: The total number of UE Initiated Secondary contexts created in the system. Triggers: Increments when a UE initiated secondary bearer is created Availability: Per IMS authorization service	Int32
dpca-secterm	Description: The total number of secondary contexts deleted for DPCA sessions on this system. Triggers: Increments when a UE initiated secondary bearer is terminated Availability: Per IMS authorization service	Int32
dpca-sessupd	Description: The total number of updates to DPCA sessions on this system. Triggers: Increments whenever a CCR-U message is sent Availability: Per IMS authorization service	Int32
dpca-term	Description: The total number of DPCA sessions terminated. Triggers: Increments when a IMSA session is terminated Availability: Per IMS authorization service	Int32

Variables	Description	Data Type
dpca-msg-recv	Description: The total number of DPCA messages received by IMS authorization services configured on this system. Triggers: Increments whenever any DPCA message is received Availability: Per IMS authorization service	Int32
dpca-msg-sent	Description: The total number of DPCA messages sent by IMS authorization services configured on this system. Triggers: Increments whenever any DPCA message is sent out of the chassis Availability: Per IMS authorization service	Int32
dpca-msg-ccr	Description: The total number of DPCA credit control request messages sent by IMS authorization services configured on this system. Triggers: Increments when a CCR message is sent Availability: Per IMS authorization service	Int32
dpca-msg-cca	Description: The total number of DPCA credit control answer messages received by IMS authorization services configured on this system. Triggers: Increments when a CCA message is received Availability: Per IMS authorization service	Int32
dpca-msg-ccrinit	Description: The total number of initial DPCA credit control request messages sent by IMS authorization services configured on this system. Triggers: Increments when a CCR-I message is sent Availability: Per IMS authorization service	Int32
dpca-msg-ccainit	Description: The total number of initial DPCA credit control accept messages received by IMS authorization services configured on this system. Triggers: Increments when a CCA-I message is received Availability: Per IMS authorization service	Int32
dpca-msg-ccainitacc	Description: The total number of initial DPCA credit control accept messages accepted in response to initial credit control request messages sent by IMS authorization services configured on this system. Triggers: Increments when a CCA-I message is accepted Availability: Per IMS authorization service	Int32
dpca-msg-ccainitrej	Description: The total number of initial DPCA credit control accept messages rejected in response to initial credit control request messages sent by IMS authorization services configured on this system. Triggers: Increments when a CCA-I message is rejected Availability: Per IMS authorization service	Int32
dpca-msg-ccrupd	Description: The total number of CCR Update messages sent. Triggers: Increments when a CCR-U message is sent Availability: Per IMS authorization service	Int32
dpca-msg-ccaupd	Description: The total number of CCA Update messages received. Triggers: Increments when a CCA-U message is received Availability: Per IMS authorization service	Int32

Common Syntax Options

Variables	Description	Data Type
dpca-msg-ccauperror	Description: The total number of DPCA credit control accept messages received in response to credit control request update error messages sent by IMS authorization services configured on this system. Triggers: Increments when there is an error in CCA-U message Availability: Per IMS authorization service	Int32
dpca-msg-ccrfin	Description: The total number of CCR Terminate messages sent. Triggers: Increments when CCR-T message is sent Availability: Per IMS authorization service	Int32
dpca-msg-ccafin	Description: The total number of final DPCA credit control accept messages received in response to final credit control request messages sent by IMS authorization services configured on this system. Triggers: Increments when CCA-T message is received Availability: Per IMS authorization service	Int32
dpca-msg-ccafinerror	Description: The total number of final DPCA credit control accept messages received in response to final credit control request error messages sent by IMS authorization services configured on this system. Triggers: Increments when there is an error in CCA-T message Availability: Per IMS authorization service	Int32
dpca-msg-asr	Description: The total number of DPCA Abort-Session-Request messages received by IMS Authorization services configured on this system. Triggers: Increments when ASR message is sent (Not supported for 3GPP Rel. 7 standard and higher) Availability: Per IMS authorization service	Int32
dpca-msg-asa	Description: The total number of DPCA Abort-Session-Accept messages sent in response to Abort-Session-Request messages received by IMS Authorization services configured on this system. Triggers: Increments when ASA message is received Availability: Per IMS authorization service	Int32
dpca-msg-rar	Description: The total number of Re-Auth-Request messages received by IMS Authorization services configured on this system. Triggers: Increments when RAR message is received Availability: Per IMS authorization service	Int32
dpca-msg-raa	Description: The total number of DPCA Re-Auth-Accept messages sent in response to Re-Auth-Request messages received by IMS Authorization services configured on this system. Triggers: Increments when RAA message is sent Availability: Per IMS authorization service	Int32
dpca-msgerr-proto	Description: The total number of Diameter protocol error messages received by IMS Authorization services configured on this system. Triggers: Increments when result code of 3xxx is received Availability: Per IMS authorization service	Int32
dpca-msgerr-badans	Description: The total number of bad response/answer error messages received by IMS Authorization services configured on this system. Triggers: Increments when a bad answer error message is received Availability: Per IMS authorization service	Int32

Variables	Description	Data Type
dpca-msgerr-unksessreq	Description: The total number of error messages related to unknown session requests received by IMS Authorization services configured on this system. Triggers: Increments when RAR message is received for an unknown session Availability: Per IMS authorization service	Int32
dpca-msgerr-unkcomm	Description: The total number of error messages related to unknown command codes received by IMS Authorization services configured on this system. Triggers: Increments when a message with unknown command code is received Availability: Per IMS authorization service	Int32
dpca-msgerr-unsupcomm	Description: The total number of error messages related to unknown failure handling received by IMS Authorization services configured on this system. Triggers: Increments when an unsupported command is received Availability: Per IMS authorization service	Int32
dpca-term-diamlogout	Description: The total number of DPCA session terminations due to Diameter logouts. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32
dpca-term-servnotprov	Description: The total number of DPCA session terminations due to unavailability of service. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32
dpca-term-badans	Description: The total number of DPCA session terminations due to bad responses/answers. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32
dpca-term-admin	Description: The total number of DPCA session terminations due to administrative reasons. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32
dpca-term-linkbroken	Description: The total number of DPCA session terminations due to a broken link. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32
dpca-term-authexp	Description: The total number of DPCA session terminations due to expired authorization. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32
dpca-term-usermoved	Description: The total number of DPCA session terminations due to the subscriber moving to an unknown or non-serviceable area. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32
dpca-term-sesstmo	Description: The total number of DPCA session terminations due to sessions timing out. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32
dpca-term-authrej	Description: The total number of DPCA session terminations due to the authorization being rejected. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32

Variables	Description	Data Type
dpca-term-other	Description: The total number of DPCA session terminations due to unknown reasons or reasons not listed above. Triggers: Increments when a CCR-T message is sent with this term cause Availability: Per IMS authorization service	Int32
dpca-express-errinitparam	Description: The number of times DIAMETER_ERROR_INITIAL_PARAMETERS (5140) Experimental-Result-Code value was received in the Diameter CCA. Triggers: Increments when a CCA message is received with this experimental result code Availability: Per IMS authorization service	Int32
dpca-express-errtrigevt	Description: The number of times DIAMETER_ERROR_TRIGGER_EVENT (5141) Experimental-Result-Code value was received in the Diameter CCA. Triggers: Increments when a CCA message is received with this experimental result code Availability: Per IMS authorization service	Int32
dpca-express-bearnotauth	Description: The number of times DIAMETER_ERROR_BEARER_NOT_AUTHORIZED (5143) Experimental-Result-Code value was received in the Diameter CCA. Triggers: Increments when a CCA message is received with this experimental result code Availability: Per IMS authorization service	Int32
dpca-express-trafmaprej	Description: The number of times DIAMETER_ERROR_TRAFFIC_MAPPING_INFO_REJECTED (5144) Experimental-Result-Code value was received in the Diameter CCA. Triggers: Increments when a CCA message is received with this experimental result code Availability: Per IMS authorization service	Int32
dpca-express-pccruleevt	Description: The number of times DIAMETER_PCC_RULE_EVENT (5142) Experimental-Result-Code value was sent in the Diameter Re-Auth-Request (RAR). Triggers: Increments when a RAA message is sent with this experimental result code Availability: Per IMS authorization service	Int32
dpca-express-conflictingreq	Description: The number of Gx Experimental Result code. DIAMETER_ERROR_CONFLICTING_REQUEST (5147) error is used when the PCRF cannot accept the UE-initiated resource request as a network-initiated resource allocation is already in progress that covers the packet filters in the received UE-initiated resource request. The PCEF rejects the attempt for UE-initiated resource request. Triggers: Increments when a CCA message is received with this experimental result code Availability: Per IMS authorization service	Int32
dpca-express-bearerevt	Description: Tracks the number of Gx Experimental Transient Failures. DIAMETER_PCC_BEARER_EVENT (4141) error is used when for some reason a PCC rule cannot be enforced or modified successfully in a network initiated procedure. Affected PCC-Rules will be provided in the Charging-Rule-Report AVP including the reason and status. This is a Transient Failure. Triggers: Increments when a CCA message is received with this experimental result code Availability: Per IMS authorization service	Int32
dpca-express-badrescode	Description: The number of times an unknown Experimental-Result-Code value (apart from the ones recognized in CCA that are listed above PCC Rule Event) was received in the Diameter CCA. Triggers: Increments when this experimental result code is received in a CCA message Availability: Per IMS authorization service	Int32

Variables	Description	Data Type
dpca-peer-switch	Description: The total number of peer switches attempted. Triggers: Increments when performing a peer switch Availability: Per IMS authorization service	Int32
dpca-peer-switch-done	Description: The total number of peer switches successful. Triggers: Increments when a peer switch is done Availability: Per IMS authorization service	Int32
dpca-ccai-timeout	Description: The total number of CCA-I message timeouts. Triggers: Increments when Tx timer expires for CCA-I Availability: Per IMS authorization service	Int32
dpca-ccri-send-error	Description: The total number of CCR-I message send errors (DIABASE ERRORS), since the TCP connection to the peer is no longer available. Triggers: Increments when there is an error in sending CCR-I message Availability: Per IMS authorization service	Int32
dpca-ccai-unh-unk-rcode	Description: The total number of CCA-I messages received with unknown or unhandled result codes which have initiated the failure handling procedure configured for the any-error scenario. Triggers: Increments when there is an unknown result code in CCA-I message Availability: Per IMS authorization service	Int32
dpca-ccai-err-rcode	Description: The total number of CCA-I messages received with error result codes which have initiated the failure handling procedure configured for a particular or range of result codes. Triggers: Increments when there is a known error code in CCA-I message Availability: Per IMS authorization service	Int32
dpca-ccau-timeout	Description: The total number of CCA-U message timeouts. Triggers: Increments when Tx timer expires for CCA-U Availability: Per IMS authorization service	Int32
dpca-ccru-send-error	Description: The total number of CCR-U message send errors (DIABASE ERRORS), since the TCP connection to the peer is no longer available. Triggers: Increments when there is a diabase error while sending CCR-U message Availability: Per IMS authorization service	Int32
dpca-ccau-unh-unk-rcode	Description: The total number of CCA-U messages received with unknown or unhandled result codes which have initiated the failure handling procedure configured for the any-error scenario. Triggers: Increments when there is an unknown result code in CCA-U message Availability: Per IMS authorization service	Int32
dpca-ccau-err-rcode	Description: The total number of CCA-U messages received with error result codes which have initiated the failure handling procedure configured for a particular or range of result codes. Triggers: Increments when there is a known error code in CCA-U message Availability: Per IMS authorization service	Int32
dpca-ccat-timeout	Description: The total number of CCA-T message timeouts. Triggers: Increments when Tx timer expires for CCA-T Availability: Per IMS authorization service	Int32
dpca-ccrt-send-error	Description: The total number of CCR-T message send errors (DIABASE ERRORS), since the TCP connection to the peer is no longer available. Triggers: Increments when there is a diabase error while sending CCR-T message Availability: Per IMS authorization service	Int32

Variables	Description	Data Type
dpca-ccat-unh-unk-rcode	Description: The total number of CCA-T messages received with unknown or unhandled result codes which have initiated the failure handling procedure configured for the any-error scenario. Triggers: Increments when there is an unknown result code in CCA-T message Availability: Per IMS authorization service	Int32
dpca-ccat-err-rcode	Description: The total number of CCA-T messages received with error result codes which have initiated the failure handling procedure configured for a particular or range of result codes. Triggers: Increments when there is a known error code in CCA-T message Availability: Per IMS authorization service	Int32
dpca-ccfh-continue	Description: The total number of times the failure handling action continue has been undertaken. Triggers: Increments when CCFH continue action is undertaken Availability: Per IMS authorization service	Int32
dpca-ccfh-retry-and-term	Description: The total number of times the failure handling action retry-and-terminate has been undertaken. Triggers: Increments when CCFH retry and terminate action is undertaken Availability: Per IMS authorization service	Int32
dpca-ccfh-terminate	Description: The total number of times the failure handling action terminate has been undertaken. Triggers: Increments when CCFH terminate action is undertaken Availability: Per IMS authorization service	Int32
dpca-unknown-reason	Description: The total number of sessions released due to unspecified reasons. Triggers: Increments when unspecified reason is received in Session Release Cause in RAR message Availability: Per IMS authorization service	Int32
dpca-ue-subscription-chngd	Description: The total number of sessions released due to a change in the UE subscription. Triggers: Increments when UE subscription reason is received in Session Release Cause in RAR message Availability: Per IMS authorization service	Int32
dpca-insuffent-srvr-resrce	Description: The total number of sessions released due to insufficient server resources. Triggers: Increments when insufficient resources are received in Session Release Cause in RAR message Availability: Per IMS authorization service	Int32
dpca-fail-connfh-totmsgtmo	Description: The total number of message timeouts. Triggers: Increments whenever Tx timeouts for CCA-I, CCA-U, and CCA-T Availability: Per IMS authorization service	Int32
dpca-fail-connfh-totmsgsender	Description: The total number of message send errors (DIABASE ERRORS), since the TCP connection to the peer is no longer available. Triggers: Increments when there is a diabase error while sending CCR-I, CCR-U, and CCR-T messages Availability: Per IMS authorization service	Int32
dpca-fail-rescodefh-confrescode	Description: The total number of messages received with error result codes which have initiated the failure handling procedure configured for a particular or range of result codes. Triggers: Increments when there is a known error result code in CCA-I, CCA-U, and CCA-T messages Availability: Per IMS authorization service	Int32

Variables	Description	Data Type
dpca-fail-rescodefh-unhunkrescode	Description: The total number of messages received with unknown or unhandled result codes which have initiated the failure handling procedure configured for the any-error scenario. Triggers: Increments when there is an unknown error result code in CCA-I, CCA-U, and CCA-T messages Availability: Per IMS authorization service	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 36

IP Pool Schema Statistics

The IP Pool schema provides operational statistics that can be used for monitoring and troubleshooting the following products: GGSN, HSGW, P-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 36. Bulk Statistic Variables in the IP Pool Schema

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system where the IP pool is configured. This is a key variable. Type: Information	Int32

Variables	Description	Data Type
vpnname	The name of the context configured on the system where the IP pool is configured. This is a key variable. Type: Information	String
addr-type	The IPv6 pool address type. Type: Information	String
type	The type of IP pool. Output for this variable is one of three characters; P, R, or S: • P = Public • R = Private • S = Static Type: Information	String
state	The IP pool state. Output for this variable is one of three characters; G, D, or R: G = Good D = Pending Delete R = Resizing Type: Information	String
priority	The priority setting for the IP pool. Type: Information	Int32
name	The name of the IP pool. Type: Information	String
used	The number of IP addresses that have been assigned from the IP pool. Type: Gauge	Int32
hold	The number of IP addresses in the IP pool that are in a hold state. Type: Gauge	Int32
release	The number of IP addresses in the IP pool that are in a release state. Type: Gauge	Int32
free	The number of IP addresses in the IP pool that are available for use. Type: Gauge	Int32
startaddr	The starting address of the IP pool. Type: Information	String
groupname	The name of the pool group to which the IP pool belongs. Type: Information	String



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 37

IPSG Schema Statistics

The IPSG schema provides operational statistics that can be used for monitoring and troubleshooting the following products: IPSG

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 37. Bulk Statistic Variables in the IPSG Schema

Variables	Description	Data Type

Variables	Description	Data Type
vpnname	Description: Name of the VPN context in which the IPSG service is configured. This is a key variable. Triggers: Is updated when an IPSG service is configured. Availability: Per IPSG service. Type: Information.	String
vpnid	Description: Identification number of the VPN context in which the IPSG service is configured. This is a key variable. Triggers: Is updated when an IPSG service is configured. Availability: Per IPSG service. Type: Information.	Int32
servname	Description: Name of the IPSG service. This is a key variable. Triggers: Is updated when an IPSG service is configured. Availability: Per IPSG service. Type: Information.	String
servid	Description: Identification number of the service configured on the system that is currently facilitating the IPSG service. This is an internal reference number. This is a key variable. Triggers: Is updated when an IPSG service is configured. Availability: Per IPSG service. Type: Information.	Int32
total-start-req-rcv	Description: The total number of accounting start requests received by the IPSG service. Triggers: Increments when an accounting start message is sent from RADIUS client to IPSG. Availability: Per IPSG service. Type: Counter.	Int32
total-start-req-retrans-rcv	Description: The total number of accounting start request retransmissions received by the IPSG service. Triggers: Increments when a retransmitted Accounting-Start message is received. If Accounting-Start message comes again matching an established session with same IP address, Username+MSISDN, APN, NAS-IP-Address, Accounting-Session-ID, and Source-IP address of the IP packet, it is treated as retransmission. Availability: Per IPSG service. Type: Counter.	Int32
total-start-rsp-sent	Description: The total number of start responses sent by the IPSG service. Triggers: Increments when an accounting response is sent for Accounting-Start received by IPSG. Availability: Per IPSG service. Type: Counter.	Int32
total-interim-update-req-rcv	Description: The total number of interim update requests received by the IPSG service. Triggers: Increments when an interim message is received after call is up. Availability: Per IPSG service. Type: Counter.	Int32
total-stop-req-rcv	Description: The total number of stop requests received by the IPSG service. Triggers: Increments when an Accounting-Stop request is received. Availability: Per IPSG service. Type: Counter.	Int32

Variables	Description	Data Type
total-unknown-req-rcv	Description: The total number of unknown requests received by the IPSG service. Triggers: Increments when an accounting message has unknown request. Valid RADIUS requests are Accounting-Start, Accounting-Interim, Accounting-Stop, Accounting-On, Accounting-Off, Access Request. For all other RADIUS messages unknown req will be updated. Availability: Per IPSG service. Type: Counter.	Int32
total-rsp-sent	Description: The total number of responses sent by the IPSG service. Triggers: Increments with every response sent (auth response + accounting response + other messages). Availability: Per IPSG service. Type: Counter.	Int32
total-discard-msgs-unknown-clnt	Description: The total number of messages discarded by IPSG since they were received from an unknown client. Triggers: Increments if in accounting messages the IP address does not match the current RADIUS client subscriber. RADIUS client subscribers are configured in IPSG service. Availability: Per IPSG service. Type: Counter.	Int32
total-discard-msgs-ignore-interim	Description: The total number of RADIUS Accounting-Interim messages ignored by IPSG since they were received for non-existing sessions. Triggers: Increments on receiving RADIUS Accounting-Interim messages for non-existing session. If session creation based on Accounting-Interim is supported then this counter will never increment. Availability: Per IPSG service. Type: Counter.	Int32
total-discard-msgs-ignore-stop	Description: The total number of RADIUS Accounting-Stop messages ignored by IPSG since they were received for non-existing sessions. Triggers: Increments on receiving RADIUS Accounting-Stop messages for non-existing session. Availability: Per IPSG service. Type: Counter.	Int32
total-discard-msgs-incorrect-secret	Description: The total number of messages discarded by IPSG due to an incorrect secret. Triggers: Increments on mismatch of shared secrets between RADIUS client/IPSG and IPSG/RADIUS server. Availability: Per IPSG service. Type: Counter.	Int32
total-discard-msgs-attr-missing	Description: The total number of messages discarded by IPSG due to a missing attribute. Triggers: Increments if a RADIUS packet does not have the needed attributes. Availability: Per IPSG service. Type: Counter.	Int32
rad-servaddr	Description: IP address of the RADIUS server supporting the service. Triggers: Is updated when a RADIUS server is configured. Availability: Per IPSG service. Type: Information.	String

Variables	Description	Data Type
rad-servport	Description: Port number of the RADIUS server supporting the service. Triggers: Is updated when a RADIUS server is configured. Availability: Per IPSG service. Type: Information.	Int32

Chapter 38

LAC Schema Statistics

The LAC schema provides operational statistics that can be used for monitoring and troubleshooting the following products: PDSN, GGSN, HA.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 38. Bulk Statistic Variables in the LAC Service Schema

Variables	Description	Data Type
vpnname	Description: The name of the context configured on the system that is currently facilitating the LAC service. This is a key variable.	String

Variables	Description	Data Type
vpnid	Description: The identification number of the context configured on the system that is currently facilitating the LAC service. This is an internal reference number. This is a key variable.	Int32
servname	Description: Displays the name of the LAC service for which the statistics are displayed. This is a key variable.	String
tun-conn-attempt	Description: This proprietary counter indicates the total number of tunnel connection attempts. Triggers: - Incremented when a tunnel request is received or a new tunnel is started. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-conn-success	Description: This proprietary counter indicates the total number of successful tunnel connections. Triggers: - Incremented when a tunnel is established. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-conn-fail	Description: This proprietary counter indicates the total number of failed tunnel connections. Triggers: - Incremented when a tunnel connection failed. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-conn-curactive	Description: This proprietary counter indicates the total number of currently active tunnel connections. Triggers: - Incremented when a tunnel is established, decremented when a tunnel is released. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-attempts	Description: This proprietary counter indicates the total number of session connection attempts. Triggers: - Incremented when a session request is received or a new session is started. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-successful	Description: This proprietary counter indicates the total number of successful session connections. Triggers: - Incremented when a session is connected. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-failed	Description: This proprietary counter indicates the total number of failed session connections. Triggers: - Incremented when a session connection failed. Availability: per L2TP service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
sess-curactive	Description: This proprietary counter indicates the total number of currently active session connections. Triggers: - Incremented when a session is connected, decremented when a session is released. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-intrapdsnho-attempt	Description: This proprietary counter indicates the total number of Intra-PDSN Hand-Offs connection attempts. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-intrapdsnho-success	Description: This proprietary counter indicates the total number of successful Intra-PDSN Hand-Offs connections. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-intrapdsnho-failed	Description: This proprietary counter indicates the total number of failed Intra-PDSN Hand-Offs connections. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-interpdsnho-attempt	Description: This proprietary counter indicates the total number of Inter-PDSN Hand-Offs connection attempts. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-malformed	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to malformed packets. Triggers: - Incremented when a malformed packets is received. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-ctrlfield	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to control field errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-pktlen	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to packet length errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-avplen	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to AVP length errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-protover	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to protocol version errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
recv-err-md5	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to MD5 errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-invattr	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to invalid attribute errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-unkattr	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to unknown attribute errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-invsessid	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to invalid session ID errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-invstate	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to invalid state errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-unkmsg	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to unknown message errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-unmatchpktlen	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to unmatched packet length errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
recv-err-invtunid	Description: This proprietary counter indicates the total number of Tunnel Receive Control Packet errors experienced due to invalid tunnel length errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-genclear	Description: This proprietary counter indicates the total number of tunnels cleared normally. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-ctrlconnexists	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to a pre-existing control connection. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-unauth	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to unauthorized errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
tun-badproto	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to bad protocol errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-reqshutdown	Description: This proprietary counter indicates the total number of tunnel disconnects experienced due to requester shutdown. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-statemacherr	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to state machine errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-badlen	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to wrong length errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-oor	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to out-of-range errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-noresource	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to insufficient resources. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-vendspec	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to vendor-specific errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-tryanotherlns	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced resulting in “Try Another LNS” message generation. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-unkavp	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to unknown AVP with M-bit errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-ipsecdisc	Description: This proprietary counter indicates the total number of tunnel disconnects experienced due to IPSEC. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-ipsecfail	Description: This proprietary counter indicates the total number of tunnel failures experienced due to IPSEC. Availability: per L2TP service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
tun-license	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to license exceeded errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-newcallpoldisc	Description: This proprietary counter indicates the total number of tunnel disconnects experienced due to new call policies. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-maxretry	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to the maximum number of retries being exceeded. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-syslimit	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to reaching the system tunnel limit. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
tun-miscerr	Description: This proprietary counter indicates the total number of tunnel disconnects/failures experienced due to miscellaneous errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-nogeneral	Description: This proprietary counter indicates the total number of sessions for which there were no general errors experienced. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-admin	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to administrative reasons. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-lossofcarr	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to loss of carrier. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-remoteadmin	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to remote administrative reasons. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-nofactemp	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to temporary no facility available errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-nofacperm	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to permanent no facility available errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
sess-invdest	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to invalid destination errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-nocarrier	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due no carrier being detected. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-busysig	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to receipt of a busy signal. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-nodialtime	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to receipt of no dial tone. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-lactimeout	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to LAC timeout. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-noframing	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to no appropriate framing. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-noctrlconn	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to no control connection existing. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-badlen	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to wrong length errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-oor	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to out-of-range errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-noresource	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to insufficient resources. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-invssid	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to an invalid session ID. Availability: per L2TP service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
sess-vendspec	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to vendor specific errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-tryanotherlns	Description: This proprietary counter indicates the total number of session disconnects/failures experienced resulting in “Try Another LNS” message generation. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-unkavp	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to unknown AVP with M-bit errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-maxtunnel	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to reaching the maximum tunnel limit. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-ipsecfail	Description: This proprietary counter indicates the total number of session failures experienced due to IPSEC. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-ipsecdisc	Description: This proprietary counter indicates the total number of session disconnects experienced due to IPSEC. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-newcallpoldisc	Description: This proprietary counter indicates the total number of session disconnects experienced due to new call policies. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-license	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to license exceeded errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-servmismatch	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to service mismatch errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32
sess-miscerr	Description: This proprietary counter indicates the total number of session disconnects/failures experienced due to miscellaneous errors. Availability: per L2TP service, per PCF, per session Type: Counter	Int32

Variables	Description	Data Type
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 39

LMA Schema Statistics

The LMA schema provides operational statistics that can be used for monitoring and troubleshooting the following products: P-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 39. Bulk Statistic Variables in the LMA Service Schema

Variables	Description	Data Type
vpnname	Description: The name of the context configured on the system that is currently facilitating the LMA service. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	Description: The identification number of the context configured on the system that is currently facilitating the LMA service. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	Description: Displays the name of the LMA service for which the statistics are displayed. This is a key variable. Type: Information	String
servid	Description: The identification number of the service configured on the system that is currently facilitating the LMA service. This is an internal reference number. This is a key variable. Type: Information	Int32
sess-cur	Description: The total number of sessions currently active in the LMA service. Triggers: 1. Increments when new session is set up. 2. Decrementd when session is tom down. Availability: per LMA service Type: Gauge	Int32
mipaaaauth-attempts	Description: The total number of mobile IP AAA Authentication attempts on receiving Binding request message by LMA service. Triggers: Increments when auth attempted on receiving Bind message. Availability: per LMA service Type: Counter	Int32
mipaaaauth-success	Description: The total number of successful mobile IP AAA Authentication attempts made by LMA service. Triggers: Increments when auth is successful when attempted. Availability: per LMA service Type: Counter	Int32
mipaaaauth-totalfailures	Description: The total number of failed mobile IP AAA authentication attempts received by LMA service. Triggers: Increments when auth failed when attempted. Availability: per LMA service Type: Counter	Int32
mipaaaauth-actualauthfailures	Description: The total number of mobile IP AAA authentication failures received by LMA service. Triggers: Increments when actual auth failed when attempted. Availability: per LMA service Type: Counter	Int32
mipaaaauth-miscauthfailures	Description: The total number of miscellaneous mobile IP AAA authentication failures received by LMA service. Triggers: Increments when auth failed due to other reasons when attempted. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindupd	Description: The total number of all binding updates received by LMA service. Triggers: Increments when binding updated request is received. Availability: per LMA service Type: Counter	Int32
bindupd-accept	Description: The total number of all binding updates received and accepted by LMA service. Triggers: Increments when binding update request is accepted. Availability: per LMA service Type: Counter	Int32
bindupd-denied	Description: The total number of all binding updates received and denied by LMA service. Triggers: Increments when binding update request is rejected/denied. Availability: per LMA service Type: Counter	Int32
bindupd-discard	Description: The total number of all binding updates received and discarded by LMA service. Triggers: Increments when binding update request is discarded. Availability: per LMA service Type: Counter	Int32
bindupd-initial	Description: The total number of all initial binding updates received by LMA service. Triggers: Increments when initial binding updated request is received. Availability: per LMA service Type: Counter	Int32
bindupd-initialaccept	Description: The total number of initial binding updates received and accepted by LMA service. Triggers: Increments when initial binding update request is accepted. Availability: per LMA service Type: Counter	Int32
bindupd-initialdenied	Description: The total number of initial binding updates received and denied by LMA service. Triggers: Increments when initial binding update request is rejected/denied. Availability: per LMA service Type: Counter	Int32
bindupd-refresh	Description: The total number of all refresh binding update requests received by LMA service. Triggers: Increments when renew binding updated request is received. Availability: per LMA service Type: Counter	Int32
bindupd-refreshaccept	Description: The total number of refresh binding update requests received and accepted by LMA service. Triggers: Increments when renew binding update request is accepted. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindupd-refreshdenied	Description: The total number of refresh binding update requests received and denied by LMA service. Triggers: Increments when renew binding update request is rejected/denied. Availability: per LMA service Type: Counter	Int32
bindupd-dereg	Description: The total number of all deregistration request binding updates received by LMA service. Triggers: Increments when dereg binding updated request is received. Availability: per LMA service Type: Counter	Int32
bindupd-deregaccept	Description: The total number of deregistration request binding updates received and accepted by LMA service. Triggers: Increments when dereg binding update request is accepted. Availability: per LMA service Type: Counter	Int32
bindupd-deregdenied	Description: The total number of deregistration request binding updates received and denied by LMA service. Triggers: Increments when dereg binding update request is rejected/denied. Availability: per LMA service Type: Counter	Int32
bindupd-handoff	Description: The total number of all handoff request binding updates received by LMA service. Triggers: Increments when handoff binding updated request is received. Availability: per LMA service Type: Counter	Int32
bindupd-handoffaccept	Description: The total number of handoff request binding updates received and accepted by LMA service. Triggers: Increments when handoff binding update request is accepted. Availability: per LMA service Type: Counter	Int32
bindupd-handoffdenied	Description: The total number of handoff request binding updates received and denied by LMA service. Triggers: Increments when handoff binding update request is rejected/denied. Availability: per LMA service Type: Counter	Int32
bindupd-ack	Description: The total number of all binding update acknowledgements sent by LMA service. Triggers: Increments when binding Ack is sent. Availability: per LMA service Type: Counter	Int32
bindupd-ackacceptreg	Description: The total number of accepted registration binding update acknowledgements sent by LMA service. Triggers: Increments when binding Ack is sent with success status code. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindupd-ackacceptdereg	Description: The total number of accepted deregistration binding update acknowledgements sent by LMA service. Triggers: Increments when dereg binding Ack is sent with success status code. Availability: per LMA service Type: Counter	Int32
bindupd-ackdenied	Description: The total number of denied binding update acknowledgements sent by LMA service. Triggers: Increments when binding Ack is denied and sent with error status code. Availability: per LMA service Type: Counter	Int32
bindupd-acksenderror	Description: The total number of send error binding update acknowledgements sent by LMA service. Triggers: Increments when error is encountered while sending binding Ack. Availability: per LMA service Type: Counter	Int32
bindupd-denynoresource	Description: The total number of binding update deny messages, due to insufficient resources, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Insufficient resources”. Availability: per LMA service Type: Counter	Int32
bindupd-denymisid	Description: The total number of binding update deny messages, due to mismatched IDs, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Mismatched ID”. Availability: per LMA service Type: Counter	Int32
bindupd-denymnauthfailure	Description: The total number of binding update deny messages, due to a mobile node authentication failure condition, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Mobility Auth failed”. Availability: per LMA service Type: Counter	Int32
bindupd-denyadmin	Description: The total number of binding update deny messages, due to an admin prohibited condition, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Admin Prohibited”. Availability: per LMA service Type: Counter	Int32
bindupd-denymsgidreq	Description: The total number of binding update deny messages, due to requiring a message ID, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Mesg ID Req’d”. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindupd-denydadfailed	Description: The total number of binding update deny messages, due to DAD failure, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “DAD failed”. Availability: per LMA service Type: Counter	Int32
bindupd-denynothomesub	Description: The total number of binding update deny messages, due to an incorrect home subnet, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Not Home Subnet”. Availability: per LMA service Type: Counter	Int32
bindupd-denyseqoow	Description: The total number of binding update deny messages, due to sequence out of window, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Sequence Number out of window”. Availability: per LMA service Type: Counter	Int32
bindupd-denytypchgis	Description: The total number of binding update deny messages, due to a disallowed registration type change, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Reg Type change Disallowed”. Availability: per LMA service Type: Counter	Int32
bindupd-denyunspec	Description: The total number of binding update deny messages, due to an unspecified reason, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Unspecified reason”. Availability: per LMA service Type: Counter	Int32
bindupd-denyauthfailed	Description: The total number of binding update deny messages, due to a service authorization failure, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Service authorization failed”. Availability: per LMA service Type: Counter	Int32
bindupd-denyproxyreg	Description: The total number of binding update deny messages, due to a proxy registration not enabled error, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Proxy Reg Not enabled”. Availability: per LMA service Type: Counter	Int32
bindupd-denytimestamp	Description: The total number of binding update deny messages, due to a timestamp mismatch error, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Timestamp mismatch”. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindupd-denytimestamplower	Description: The total number of binding update deny messages, due to a timestamp lower than expected reason, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Timestamp lower than expected”. Availability: per LMA service Type: Counter	Int32
bindupd-denymismnid	Description: The total number of binding update deny messages, due to a missing MN-ID option, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Missing MN-ID option”. Availability: per LMA service Type: Counter	Int32
bindupd-denymishnp	Description: The total number of binding update deny messages, due to a missing HNP option, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Missing HNP option”. Availability: per LMA service Type: Counter	Int32
bindupd-denymisaccesstech	Description: The total number of binding update deny messages, due to a missing access technology option, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Missing Access Tech option”. Availability: per LMA service Type: Counter	Int32
bindupd-denymishandoffind	Description: The total number of binding update deny messages, due to a missing handoff indicator option, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Missing Handoff indication option”. Availability: per LMA service Type: Counter	Int32
bindupd-denynotauthhnp	Description: The total number of binding update deny messages, due to a not authorized for HNP reason, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Not Authorized for HNP”. Availability: per LMA service Type: Counter	Int32
bindupd-denynotlmamobile	Description: The total number of binding update deny messages, due to a missing LMA for the MN, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Not LMA for mobile”. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindupd-denynotauthproxyreg	Description: The total number of binding update deny messages, due to a not authorized for proxy registration reason, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “Not Authorized for Proxy Reg”. Availability: per LMA service Type: Counter	Int32
bindupd-denybceprefix	Description: The total number of binding update deny messages, due to a BCE prefix not matching, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “BCE prefix set do not match”. Availability: per LMA service Type: Counter	Int32
bindupd-denygrekey	Description: The total number of binding update deny messages, due to a GRE key option required, sent by LMA service. Triggers: Increments when Binding Ack is sent with status code “GRE key option required”. Availability: per LMA service Type: Counter	Int32
bindupd-denynoresourcesessmgr	Description: The total number of binding update deny messages, due to insufficient resources - no session manager, sent by LMA service. Increments when Binding Update rejected due to No sessmgr. Triggers: Increments when Binding Update rejected due to No sessmgr. Availability: per LMA service Type: Counter	Int32
bindupd-denynoresourcememory	Description: The total number of binding update deny messages, due to insufficient resources - no memory, sent by LMA service. Triggers: Increments when Binding Update rejected due to memory alloc failure. Availability: per LMA service Type: Counter	Int32
bindupd-denynoresourcereject	Description: The total number of binding update deny messages, due to insufficient resources - session manager rejected, sent by LMA service. Triggers: Increments when Binding Update rejected due to sessmgr rejection. Availability: per LMA service Type: Counter	Int32
bindupd-denynoresourceinputq	Description: The total number of binding update deny messages, due to insufficient resources - input queue exceeded, sent by LMA service. Triggers: Increments when Binding Update rejected due to demux queue exceeding limit. Availability: per LMA service Type: Counter	Int32
bindupd-denynoresourcesimulbind	Description: The total number of binding update deny messages, due to insufficient resources - simultaneous bindings exceeded, sent by LMA service. Triggers: Increments when Binding Update rejected due to session exceeding binding limit. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindupd-denynoresourceaddallocfail	Description: The total number of binding update deny messages, due to insufficient resources - address allocation failed, sent by LMA service. Triggers: Increments when Binding Update rejected due to address alloc failure. Availability: per LMA service Type: Counter	Int32
bindupd-denyadminprohmnaaaauth	Description: The total number of binding update deny messages, due to an administrator prohibited - MN-AAA auth option missing condition, sent by LMA service. Triggers: Increments when Binding Update rejected due to missing MN-AAA auth option. Availability: per LMA service Type: Counter	Int32
bindupd-denyadminprohhbit	Description: The total number of binding update deny messages, due to an administrator prohibited - H-bit not set condition, sent by LMA service. Triggers: Increments when Binding Update rejected due to H bit not set. Availability: per LMA service Type: Counter	Int32
bindupd-denyadminprohmnaaspi	Description: The total number of binding update deny messages, due to an administrator prohibited - invalid MN-AAA option SPI condition, sent by LMA service. Triggers: Increments when Binding Update rejected due to invalid SPI in MN-AAA auth option. Availability: per LMA service Type: Counter	Int32
bindupd-denyadminprohmnhaspi	Description: The total number of binding update deny messages, due to an administrator prohibited - invalid MN-HA option SPI condition, sent by LMA service. Triggers: Increments when Binding Update rejected due to invalid SPI in MN-HA auth option. Availability: per LMA service Type: Counter	Int32
bindupd-denyadmincong	Description: The total number of binding update deny messages, due to an administrator prohibited - congestion control condition, sent by LMA service. Triggers: Increments when Binding Update rejected due congestion control. Availability: per LMA service Type: Counter	Int32
bindupd-denyadminpolrej	Description: The total number of binding update deny messages, due to an administrator prohibited - policy rejected condition, sent by LMA service. Triggers: Increments when Binding Update rejected due policy. Availability: per LMA service Type: Counter	Int32
bindupd-denyadminhoa	Description: The total number of binding update deny messages, due to an administrator prohibited - HoA not authorized condition, sent by LMA service. Triggers: Increments when Binding Update rejected due HoA authorization failure. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindupd-denyadminperm	Description: The total number of binding update deny messages, due to an administrator prohibited - no permission condition, sent by LMA service. Triggers: Increments when Binding Update rejected due to no permission. Availability: per LMA service Type: Counter	Int32
bindupd-denyadminbadreq	Description: The total number of binding update deny messages, due to an administrator prohibited - bad request condition, sent by LMA service. Triggers: Increments when Binding Update decode fails. Availability: per LMA service Type: Counter	Int32
bindupd-discardcong	Description: The total number of binding update discarded messages, due to congestion, sent by LMA service. Triggers: Increments when Binding Update discarded due to congestion control. Availability: per LMA service Type: Counter	Int32
bindupd-discardchecksum	Description: The total number of binding update discarded messages, due to checksum error(s), sent by LMA service. Triggers: Increments when Binding Update discarded due to checksum error Availability: per LMA service Type: Counter	Int32
bindupd-discardauthpending	Description: The total number of binding update discarded messages, due to an initial authentication pending condition, sent by LMA service. Triggers: Increments when Binding Update discarded when initial registration is still being processed. Availability: per LMA service Type: Counter	Int32
bindupd-discardsessnotfound	Description: The total number of binding update discarded messages, due to a session not found condition, sent by LMA service. Triggers: Increments when Binding Update discarded due to session not found internally when expected. Availability: per LMA service Type: Counter	Int32
bindupd-discardhamgrnotready	Description: The total number of binding update discarded messages, due to an HA manager not found condition, sent by LMA service. Triggers: Increments when Binding Update discarded due to hamgr not ready. Availability: per LMA service Type: Counter	Int32
bindupd-discarddecodefail	Description: The total number of binding update discarded messages, due to a decode failure, sent by LMA service. Triggers: Increments when Binding Update discarded due to decode failure. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindupd-discardinbuflen	Description: The total number of binding update discarded messages, due to an invalid buffer length, sent by LMA service. Triggers: Increments when Binding Update discarded due to packet buffer length. Availability: per LMA service Type: Counter	Int32
bindupd-discardrevoc	Description: The total number of binding update discarded messages, due to a revocation pending, sent by LMA service. Triggers: Increments when Binding Update discarded due to pending revocation. Availability: per LMA service Type: Counter	Int32
bindrev-sent	Description: The total number of binding revocations sent by LMA service. Triggers: Increments when initial Binding Revocation indication is sent. Availability: per LMA service Type: Counter	Int32
bindrev-retriessent	Description: The total number of binding revocation retries sent by LMA service. Triggers: Increments when Binding Revocation indication message is retried. Availability: per LMA service Type: Counter	Int32
bindrev-ackrcvd	Description: The total number of binding revocation acknowledgements received by LMA service. Triggers: Increments when Binding Revocation Acknowledgement is received. Availability: per LMA service Type: Counter	Int32
bindrev-notacked	Description: The total number of binding revocations sent, but not acknowledged, by LMA service. Triggers: Increments when session deleted without receiving ACK after max retries. Availability: per LMA service Type: Counter	Int32
bindrev-rcvd	Description: The total number of binding revocations received by LMA service. Triggers: Increments when Binding revocation indication is received. Availability: per LMA service Type: Counter	Int32
bindrev-acksent	Description: The total number of binding revocation acknowledgements sent by LMA service. Triggers: Increments when Binding revocation Acknowledgement is sent. Availability: per LMA service Type: Counter	Int32
sentrevtrig-reserved	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with a “Reserved” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-unspecified	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with an “Unspecified” revocation trigger reason. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
sentrevtrig-admin	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with an “Administrative Reason” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-maghoffsameatt	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with an “Inter-MAG Handoff-Same ATT” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-maghoff-unknown	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with an “Inter-MAG - Unknown Handoff” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-maghoff-diffatt	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with an “Inter-MAG Handoff-Diff ATT” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-perpeer	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with a “Per-Peer Policy” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-nodelocal	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with a “Revoking Node Local Policy” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-userinitssess	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with a “User Initiated Session Term” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-accessnwssess	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with an “Access Network Session Term” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-ipv4hoabind	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with an “IPv4 HoA Binding Only” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-syncbce	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with an “Out-of-Sync BCE State” revocation trigger reason. Availability: per LMA service Type: Counter	Int32
sentrevtrig-unknown	Description: The total number of Binding Revocation Indication (BRI) messages sent by LMA service with an “Unknown” revocation trigger reason. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
rcvdrvack-success	Description: The total number of Binding Revocation Acknowledgement (BRA) messages received by LMA service with a “Success” status. Availability: per LMA service Type: Counter	Int32
rcvdrvack-partialsuccess	Description: The total number of Binding Revocation Acknowledgement (BRA) messages received by LMA service with a “Partial-Success” status. Availability: per LMA service Type: Counter	Int32
rcvdrvack-nobinding	Description: The total number of Binding Revocation Acknowledgement (BRA) messages received by LMA service with a “Binding-Does-Not-Exist” status. Availability: per LMA service Type: Counter	Int32
rcvdrvack-noipv4hoabind	Description: The total number of Binding Revocation Acknowledgement (BRA) messages received by LMA service with a “No IPv4-HoA-Bind” status. Availability: per LMA service Type: Counter	Int32
rcvdrvack-revocnotauth	Description: The total number of Binding Revocation Acknowledgement (BRA) messages received by LMA service with a “Global-Revoc-Not-Authorized” status. Availability: per LMA service Type: Counter	Int32
rcvdrvack-bindingnotidentified	Description: The total number of Binding Revocation Acknowledgement (BRA) messages received by LMA service with a “Cannot-Identify-Binding” status. Availability: per LMA service Type: Counter	Int32
rcvdrvack-revocfailmnattach	Description: The total number of Binding Revocation Acknowledgement (BRA) messages received by LMA service with a “Revoc-Failed-MN-Attached” status. Availability: per LMA service Type: Counter	Int32
rcvdrvack-unknown	Description: The total number of Binding Revocation Acknowledgement (BRA) messages received by LMA service with an “Unknown” status. Availability: per LMA service Type: Counter	Int32
bindrev	Description: The total number of binding revocation acknowledgements received and discarded by LMA service. Triggers: Increments when Binding revocation Acknowledgement is discarded. Availability: per LMA service Type: Counter	Int32
bindrev-discardsessnotfound	Description: The total number of binding revocation acknowledgements received and discarded, due to a session not found condition, by LMA service. Triggers: Increments when Binding revocation Acknowledgement discarded due to session not found. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
bindrev-discardbadreq	Description: The total number of binding revocation acknowledgements received and discarded, due to a badly formed request condition, by LMA service. Triggers: Increments when Binding revocation Acknowledgement discarded due to badly formed message. Availability: per LMA service Type: Counter	Int32
bindrev-discarddecodeerror	Description: The total number of binding revocation acknowledgements received and discarded, due to a decode error condition, by LMA service. Triggers: Increments when Binding revocation Acknowledgement discarded due to decode failure. Availability: per LMA service Type: Counter	Int32
bindrev-discardchecksumerror	Description: The total number of binding revocation acknowledgements received and discarded, due to a checksum error condition, by LMA service. Triggers: Increments when Binding revocation Acknowledgement discarded due to checksum error. Availability: per LMA service Type: Counter	Int32
bindrev-discardinvalidmsgtype	Description: The total number of binding revocation acknowledgements received and discarded, due to an invalid memory type condition, by LMA service. Triggers: Increments when Binding revocation Acknowledgement discarded due to invalid message type. Availability: per LMA service Type: Counter	Int32
bindrev-discardhamgrmotready	Description: The total number of binding revocation acknowledgements received and discarded, due to a HAMGR not ready condition, by LMA service. Triggers: Increments when Binding revocation Acknowledgement discarded due to HAMGR not ready. Availability: per LMA service Type: Counter	Int32
bindrev-discardmatchreqnotfound	Description: The total number of binding revocation acknowledgements received and discarded, due to a matching request not found condition, by LMA service. Triggers: Increments when Binding revocation Acknowledgement discarded as matching request not found. Availability: per LMA service Type: Counter	Int32
bindrev-discardinvalidbuflen	Description: The total number of binding revocation acknowledgements received and discarded, due to an invalid buffer length condition, by LMA service. Triggers: Increments when Binding revocation Acknowledgement discarded due to invalid packet length. Availability: per LMA service Type: Counter	Int32
rxpackets	Description: The total number of packets received by LMA service. Triggers: Increments when tunneled data packet is received. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
rxpackets-6in6	Description: The total number of IPv6-in-IPv6 tunnel packets received by LMA service. Triggers: Increments when tunneled IPv6 in IPv6 encapsulated data packet is received. Availability: per LMA service Type: Counter	Int32
rxpackets-4in6	Description: The total number of IPv4-in-IPv6 tunnel packets received by LMA service. Triggers: Increments when tunneled IPv4 in IPv6 encapsulated data packet is received. Availability: per LMA service Type: Counter	Int32
rxpackets-ipv6greipv4	Description: The total number of IPv4-in-IPv6 GRE tunnel packets received by LMA service. Triggers: Increments when tunneled IPv4 in IPv6 GRE encapsulated data packet is received. Availability: per LMA service Type: Counter	Int32
rxpackets-ipv6greipv6	Description: The total number of IPv6-in-IPv6 GRE tunnel packets received by LMA service. Triggers: Increments when tunneled IPv6 in IPv6 GRE encapsulated data packet is received. Availability: per LMA service Type: Counter	Int32
rxoctets	Description: The total number of octets received by LMA service. Triggers: Increments with number of bytes received when tunneled data packet is received. Availability: per LMA service Type: Counter	Int32
rxoctets-6in6	Description: The total number of IPv6-in-IPv6 tunnel octets received by LMA service. Triggers: Increments with number of IPv6 in IPv6 bytes received when tunneled data packet is received. Availability: per LMA service Type: Counter	Int32
rxoctets-4in6	Description: The total number of IPv4-in-IPv6 tunnel octets received by LMA service. Triggers: Increments with number of IPv4 in IPv6 bytes received when tunneled data packet is received. Availability: per LMA service Type: Counter	Int32
rxoctets-ipv6greipv4	Description: The total number of IPv4-in-IPv6 GRE tunnel octets received by LMA service. Triggers: Increments with number of IPv4 in IPv6 GRE bytes received when tunneled data packet is received. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
rxoctets-ipv6greipv6	Description: The total number of IPv6-in-IPv6 GRE tunnel octets received by LMA service. Triggers: Increments with number of IPv6 in IPv6 GRE bytes received when tunneled data packet is received. Availability: per LMA service Type: Counter	Int32
dataerror	Description: The total number of data errors received by LMA service. Triggers: Increments when error is encountered on processing data packet received from the tunnel. Availability: per LMA service Type: Counter	Int32
dataerror-proto	Description: The total number of protocol type data errors received by LMA service. Triggers: Increments when packet received with invalid protocol type. Availability: per LMA service Type: Counter	Int32
dataerror-invpklen	Description: The total number of invalid packet length data errors received by LMA service. Triggers: Increments when packet received with invalid length. Availability: per LMA service Type: Counter	Int32
dataerror-noess	Description: The total number of no session found data errors received by LMA service. Triggers: Increments when packet received with session not found. Availability: per LMA service Type: Counter	Int32
txpackets	Description: The total number of packets sent by LMA service. Triggers: Increments when tunneled data packet is sent. Availability: per LMA service Type: Counter	Int32
txpackets-6in6	Description: The total number of IPv6-in-IPv6 tunnel packets sent by LMA service. Triggers: Increments when tunneled IPv6 in IPv6 encapsulated data packet is sent. Availability: per LMA service Type: Counter	Int32
txpackets-4in6	Description: The total number of IPv4-in-IPv6 tunnel packets sent by LMA service. Triggers: Increments when tunneled IPv4 in IPv6 encapsulated data packet is sent. Availability: per LMA service Type: Counter	Int32
txpackets-ipv6greipv4	Description: The total number of IPv4-in-IPv6 GRE tunnel packets sent by LMA service. Triggers: Increments when tunneled IPv4 in IPv6 GRE encapsulated data packet is sent. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
txpackets-ipv6greipv6	Description: The total number of IPv6-in-IPv6 GRE tunnel packets sent by LMA service. Triggers: Increments when tunneled IPv6 in IPv6 GREEncapsulated data packet is sent. Availability: per LMA service Type: Counter	Int32
txoctets	Description: The total number of octets sent by LMA service. Triggers: Increments with number of bytes sent when tunneled data packet is sent. Availability: per LMA service Type: Counter	Int32
txoctets-6in6	Description: The total number of IPv6-in-IPv6 tunnel octets sent by LMA service. Triggers: Increments with number of IPv6 in IPv6 bytes sent when tunneled data packet is sent. Availability: per LMA service Type: Counter	Int32
txoctets-4in6	Description: The total number of IPv4-in-IPv6 tunnel octets sent by LMA service. Triggers: Increments with number of IPv4 in IPv6 bytes sent when tunneled data packet is sent. Availability: per LMA service Type: Counter	Int32
txoctets-ipv6greipv4	Description: The total number of IPv4-in-IPv6 GRE tunnel octets sent by LMA service. Triggers: Increments with number of IPv4 in IPv6 GRE bytes sent when tunneled data packet is sent. Availability: per LMA service Type: Counter	Int32
txoctets-ipv6greipv6	Description: The total number of IPv6-in-IPv6 GRE tunnel octets sent by LMA service. Triggers: Increments with number of IPv6 in IPv6 GRE bytes sent when tunneled data packet is sent. Availability: per LMA service Type: Counter	Int32
icmpv6-pktoobigrecv	Description: The total number of tunnel ICMP packets - too big received by LMA service. Triggers: Increments when packet too big received with tunnel. Availability: per LMA service Type: Counter	Int32
icmpv6-pktoobigdrop	Description: The total number of tunnel ICMP packets - too big dropped by LMA service. Triggers: Increments when packet too big received with tunnel is dropped. Availability: per LMA service Type: Counter	Int32
icmpv6-pktoobigrelay	Description: The total number of tunnel ICMP packets - too big relayed by LMA service. Triggers: Increments when packet too big received with tunnel is relayed. Availability: per LMA service Type: Counter	Int32

Variables	Description	Data Type
disc	Description: The total number of disconnects initiated by LMA service. Triggers: Increments when LMA session disconnects. Availability: per LMA service Type: Counter	Int32
disclifetime	Description: The total number of disconnects due to lifetime expiry initiated by LMA service. Triggers: Increments when LMA session is disconnected due to lifetime expiry. Availability: per LMA service Type: Counter	Int32
discdereg	Description: The total number sessions disconnected in the LMA service due to peer deregistration. Triggers: Increments when LMA session is disconnected due to deregistration. Availability: per LMA service Type: Counter	Int32
discadmin	Description: The total number of disconnects due to admin drops initiated by LMA service. Triggers: Increments when LMA session disconnects due to Admin reasons. Availability: per LMA service Type: Counter	Int32
discother	Description: The total number of disconnects due to “other reasons” initiated by LMA service. Triggers: Increments when LMA session is disconnected due to misc reasons. Availability: per LMA service Type: Counter	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 40

LNS Schema Statistics

The LNS schema provides operational statistics that can be used for monitoring and troubleshooting the following products: L2TP Network Server (LNS).

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 40. Bulk Statistic Variables in the LNS Service Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the LNS service. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the LNS service. This is an internal reference number. This is a key variable.	Int32
servname	Displays the name of the LNS service for which the statistics are displayed. This is a key variable.	String
tun-conn-attempt	The total number of tunnel connection attempts.	Int32
tun-conn-success	The total number of successful tunnel connections.	Int32
tun-conn-fail	The total number of failed tunnel connections.	Int32
tun-conn-curactive	The total number of currently active tunnel connections.	Int32
sess-attempts	The total number of session connection attempts.	Int32
sess-successful	The total number of successful session connections.	Int32
sess-failed	The total number of failed session connections.	Int32
sess-curactive	The total number of currently active session connections.	Int32
sess-intrapdsnho-attempt	The total number of Intra-PDSN Hand-Offs connection attempts.	Int32
sess-intrapdsnho-success	The total number of successful Intra-PDSN Hand-Offs connections.	Int32
sess-intrapdsnho-failed	The total number of failed Intra-PDSN Hand-Offs connections.	Int32
sess-interpdsnho-attempt	The total number of Inter-PDSN Hand-Offs connection attempts.	Int32
recv-err-malformed	The total number of Tunnel Receive Control Packet errors experienced due to malformed packets.	Int32
recv-err-ctrlfield	The total number of Tunnel Receive Control Packet errors experienced due to control field errors.	Int32
recv-err-pktlen	The total number of Tunnel Receive Control Packet errors experienced due to packet length errors.	Int32
recv-err-avplen	The total number of Tunnel Receive Control Packet errors experienced due to AVP length errors.	Int32
recv-err-protover	The total number of Tunnel Receive Control Packet errors experienced due to protocol version errors.	Int32
recv-err-md5	The total number of Tunnel Receive Control Packet errors experienced due to MD5 errors.	Int32
recv-err-invattr	The total number of Tunnel Receive Control Packet errors experienced due to invalid attribute errors.	Int32
recv-err-unkattr	The total number of Tunnel Receive Control Packet errors experienced due to unknown attribute errors.	Int32

Variables	Description	Data Type
recv-err-invsessid	The total number of Tunnel Receive Control Packet errors experienced due to invalid session ID errors.	Int32
recv-err-invstate	The total number of Tunnel Receive Control Packet errors experienced due to invalid state errors.	Int32
recv-err-unkmsg	The total number of Tunnel Receive Control Packet errors experienced due to unknown message errors.	Int32
recv-err-unmatchpktlen	The total number of Tunnel Receive Control Packet errors experienced due to unmatched packet length errors.	Int32
recv-err-invtunid	The total number of Tunnel Receive Control Packet errors experienced due to invalid tunnel length errors.	Int32
tun-genclear	The total number of tunnels cleared normally.	Int32
tun-ctrlconnexists	The total number of tunnel disconnects/failures experienced due to a pre-existing control connection.	Int32
tun-unauth	The total number of tunnel disconnects/failures experienced due to unauthorized errors.	Int32
tun-badproto	The total number of tunnel disconnects/failures experienced due to bad protocol errors.	Int32
tun-reqshutdown	The total number of tunnel disconnects experienced due to requester shutdown.	Int32
tun-statemacherr	The total number of tunnel disconnects/failures experienced due to state machine errors.	Int32
tun-badlen	The total number of tunnel disconnects/failures experienced due to wrong length errors.	Int32
tun-oor	The total number of tunnel disconnects/failures experienced due to out-of-range errors.	Int32
tun-noresource	The total number of tunnel disconnects/failures experienced due to insufficient resources.	Int32
tun-vendspec	The total number of tunnel disconnects/failures experienced due to vendor-specific errors.	Int32
tun-tryanotherlns	The total number of tunnel disconnects/failures experienced resulting in “Try Another LNS” message generation.	Int32
tun-unkavp	The total number of tunnel disconnects/failures experienced due to unknown AVP with M-bit errors.	Int32
tun-ipsecdisc	The total number of tunnel disconnects experienced due to IPSEC.	Int32
tun-ipsecfail	The total number of tunnel failures experienced due to IPSEC.	Int32
tun-license	The total number of tunnel disconnects/failures experienced due to license exceeded errors.	Int32
tun-newcallpoldisc	The total number of tunnel disconnects experienced due to new call policies.	Int32
tun-maxretry	The total number of tunnel disconnects/failures experienced due to the maximum number of retries being exceeded.	Int32
tun-syslimit	The total number of tunnel disconnects/failures experienced due to reaching the system tunnel limit.	Int32
tun-miscerr	The total number of tunnel disconnects/failures experienced due to miscellaneous errors.	Int32
sess-nogeneral	The total number of sessions for which there were no general errors experienced.	Int32

Variables	Description	Data Type
sess-admin	The total number of session disconnects/failures experienced due to administrative reasons.	Int32
sess-lossofcarr	The total number of session disconnects/failures experienced due to loss of carrier.	Int32
sess-remoteadmin	The total number of session disconnects/failures experienced due to remote administrative reasons.	Int32
sess-nofactemp	The total number of session disconnects/failures experienced due to temporary no facility available errors.	Int32
sess-nofacperm	The total number of session disconnects/failures experienced due to permanent no facility available errors.	Int32
sess-invdest	The total number of session disconnects/failures experienced due to invalid destination errors.	Int32
sess-nocarrier	The total number of session disconnects/failures experienced due no carrier being detected.	Int32
sess-busysig	The total number of session disconnects/failures experienced due to receipt of a busy signal.	Int32
sess-nodialtime	The total number of session disconnects/failures experienced due to receipt of no dial tone.	Int32
sess-lactimeout	The total number of session disconnects/failures experienced due to LAC timeout.	Int32
sess-noframing	The total number of session disconnects/failures experienced due to no appropriate framing.	Int32
sess-noctrlconn	The total number of session disconnects/failures experienced due to no control connection existing.	Int32
sess-badlen	The total number of session disconnects/failures experienced due to wrong length errors.	Int32
sess-oor	The total number of session disconnects/failures experienced due to out-of-range errors.	Int32
sess-noresource	The total number of session disconnects/failures experienced due to insufficient resources.	Int32
sess-invsessid	The total number of session disconnects/failures experienced due to an invalid session ID.	Int32
sess-vendspec	The total number of session disconnects/failures experienced due to vendor specific errors.	Int32
sess-tryanotherlms	The total number of session disconnects/failures experienced resulting in “Try Another LNS” message generation.	Int32
sess-unkavp	The total number of session disconnects/failures experienced due to unknown AVP with M-bit errors.	Int32
sess-maxtunnel	The total number of session disconnects/failures experienced due to reaching the maximum tunnel limit.	Int32
sess-ipsecfail	The total number of session failures experienced due to IPSEC.	Int32
sess-ipsecdisc	The total number of session disconnects experienced due to IPSEC.	Int32
sess-newcallpoldisc	The total number of session disconnects experienced due to new call policies.	Int32
sess-license	The total number of session disconnects/failures experienced due to license exceeded errors.	Int32
sess-servmismatch	The total number of session disconnects/failures experienced due to service mismatch errors.	Int32
sess-miscerr	The total number of session disconnects/failures experienced due to miscellaneous errors.	Int32

Variables	Description	Data Type
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 41

MAG Schema Statistics

The MAG schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HSGW, S-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 41. Bulk Statistic Variables in the MAG Service Schema

Variables	Description	Data Type
vpnname	Description: The name of the context configured on the system that is currently facilitating the MAG service. This is a key variable.	String

Variables	Description	Data Type
vpnid	Description: The identification number of the context configured on the system that is currently facilitating the MAG service. This is an internal reference number. This is a key variable.	Int32
servname	Description: Displays the name of the MAG service for which the statistics are displayed. This is a key variable.	String
servid	Description: The identification number of the service configured on the system that is currently facilitating the MAG service. This is an internal reference number. This is a key variable.	Int32
sess-cur	Description: The total number of sessions currently established on this system. Triggers: 1. Incremented when new PDN is setup 2. Decrementd when PDN is torn down Availability: per MAG service Type: Gauge	Int32
bindupd	Description: The total number of all binding updates sent by this system. Triggers: Incremented when PBU is sent Availability: per MAG service	Int32
bindupd-init	Description: The total number of initial request transmit binding updates sent by this system. Triggers: Incremented when initial PBU is sent Availability: per MAG service	Int32
bindupd-initretrans	Description: The total number of initial request retransmit binding updates sent by this system. Triggers: Incremented when initial PBU is retransmitted Availability: per MAG service	Int32
bindupd-renew	Description: The total number of renew request transmit binding updates sent by this system. Triggers: Incremented when renew PBU is sent Availability: per MAG service	Int32
bindupd-renewretrans	Description: The total number of renew request retransmit binding updates sent by this system. Triggers: Incremented when renew PBU is retransmitted Availability: per MAG service	Int32
bindupd-dereg	Description: The total number of deregistration request transmit binding updates sent by this system. Triggers: Incremented when dereg PBU is sent Availability: per MAG service	Int32
bindupd-deregretrans	Description: The total number of deregistration request retransmit binding updates sent by this system. Triggers: Incremented when dereg PBU is retransmitted Availability: per MAG service	Int32

Variables	Description	Data Type
bindack	Description: The total number of all binding acknowledgements received by this system. Triggers: Incremented when PBA is received Availability: per MAG service	Int32
bindack-error	Description: The total number of all binding acknowledgements, with errors, received by this system. Triggers: Incremented when PBA received has some error Availability: per MAG service	Int32
bindack-accept	Description: The total number of all binding acknowledgements received, and accepted by this system or the specified service. Triggers: Incremented when PBA has Accept status code Availability: per MAG service	Int32
bindack-denied	Description: The total number of all binding acknowledgements received, but denied by this system or the specified service. Triggers: Incremented when PBA has deny status code Availability: per MAG service	Int32
bindack-init	Description: The total number of all binding acknowledgements - initial reply received by this system. Triggers: Incremented when initial PBA is received Availability: per MAG service	Int32
bindack-renew	Description: The total number of all binding acknowledgements - renew reply received by this system. Triggers: Incremented when renew PBA is received Availability: per MAG service	Int32
bindack-dereg	Description: The total number of all binding acknowledgements - deregistration reply received by this system. Triggers: Incremented when dereg PBA is received Availability: per MAG service	Int32
deniedlma-noresource	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to insufficient resources. Triggers: Incremented when PBA received with code Insufficient Resources Availability: per MAG service	Int32
deniedlma-mismatchid	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to mismatched IDs. Triggers: Incremented when PBA received with code Mismatched ID Availability: per MAG service	Int32
deniedlma-mnauthfail	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to mobile node authorization failures. Triggers: Incremented when PBA received with code MN-Auth failure Availability: per MAG service	Int32
deniedlma-adminproh	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to admin prohibited conditions. Triggers: Incremented when PBA received with code Admin Prohibited Availability: per MAG service	Int32

Variables	Description	Data Type
deniedlma-msgidrqd	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing message IDs. Triggers: Incremented when PBA received with code Mesg ID Required Availability: per MAG service	Int32
deniedlma-dadfailed	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to DAD failures. Triggers: Incremented when PBA received with code DAD failed Availability: per MAG service	Int32
deniedlma-homesubnet	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to incorrect home subnet. Triggers: Incremented when PBA received with code Not Home Subnet Availability: per MAG service	Int32
deniedlma-seqoow	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to sequence out of window conditions. Triggers: Incremented when PBA received with code Sequence out of window Availability: per MAG service	Int32
deniedlma-typhgdis	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to registration type change disallowed. Triggers: Incremented when PBA received with code Reg Type change disallowed Availability: per MAG service	Int32
deniedlma-unspec	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to unspecified reasons. Triggers: Incremented when PBA received with code Unspecified reason Availability: per MAG service	Int32
deniedlma-servauthfailed	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to failed service authorizations. Triggers: Incremented when PBA received with code Service Authorisation failed Availability: per MAG service	Int32
deniedlma-proxyreg	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to proxy registration not being enabled. Triggers: Incremented when PBA received with code Proxy Reg not enabled Availability: per MAG service	Int32
deniedlma-timestamp	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to timestamp mismatches. Triggers: Incremented when PBA received with code Time mismatch Availability: per MAG service	Int32
deniedlma-timestamplower	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to lower than expected timestamps. Triggers: Incremented when PBA received with code Timestamp lower than expected Availability: per MAG service	Int32
deniedlma-mismnid	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing mobile node ID options. Triggers: Incremented when PBA received with code Missing MN-ID option Availability: per MAG service	Int32

Variables	Description	Data Type
deniedlma-mishnp	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing HNP options. Triggers: Incremented when PBA received with code Missing HNP option Availability: per MAG service	Int32
deniedlma-misaccesstech	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing access technology options. Triggers: Incremented when PBA received with code Missing Access Tech option Availability: per MAG service	Int32
deniedlma-mishandoffind	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing handoff indication options. Triggers: Incremented when PBA received with code Missing Handoff indicator option Availability: per MAG service	Int32
deniedlma-notauthhnp	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to not being authorized for HNP. Triggers: Incremented when PBA received with code Not Authorized for HNP Availability: per MAG service	Int32
deniedlma-notlmamobile	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due incorrect LMA for mobility. Triggers: Incremented when PBA received with code Not LMA for Mobile Availability: per MAG service	Int32
deniedlma-notauthproxyreg	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to not being authorized for proxy registration. Triggers: Incremented when PBA received with code Not Authorized for Proxy Reg Availability: per MAG service	Int32
deniedlma-bceprefix	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to BCE prefix mismatches. Triggers: Incremented when PBA received with code BCE prefix set do not Match Availability: per MAG service	Int32
deniedlma-grekey	Description: The total number of binding updates sent by this system or the specified service but denied by the LMA due to GRE key option required. Triggers: Incremented when PBA received with code GRE key option required Availability: per MAG service	Int32
bindack-errormishnp	Description: The total number of binding acknowledgements with missing HNP errors received by this system or the specified service. Triggers: Incremented when PBA received that is discarded due to missing HNP option Availability: per MAG service	Int32
bindack-errormai	Description: The total number of binding acknowledgements with missing NAI errors received by this system or the specified service. Triggers: Incremented when PBA received that is discarded due to missing MN-ID option Availability: per MAG service	Int32

Variables	Description	Data Type
bindack-errorhomeaddconf	Description: The total number of binding acknowledgements with home address conflict errors received by this system or the specified service. Triggers: Incremented when PBA received that is discarded due to Home Address Conflict Availability: per MAG service	Int32
bindack-errormatchreq	Description: The total number of binding acknowledgements with matching requests not found errors received by this system or the specified service. Triggers: Incremented when PBA received that is discarded due to Matching Request not found Availability: per MAG service	Int32
bindack-errorbadlyformed	Description: The total number of binding acknowledgements with badly formed message errors received by this system or the specified service. Triggers: Incremented when PBA received that is discarded due to decode failure Availability: per MAG service	Int32
bindack-errorchecksum	Description: The total number of binding acknowledgements with checksum errors received by this system or the specified service. Triggers: Incremented when PBA received that is discarded due to Checksum error Availability: per MAG service	Int32
bindack-errorsessnotfound	Description: The total number of binding acknowledgements with session not found errors received by this system or the specified service. Triggers: Incremented when PBA received that is discarded due to session not found Availability: per MAG service	Int32
bindrev-sent	Description: The total number of binding revocations sent by this system or the specified service. Triggers: Incremented when BRI is sent by MAG service Availability: per MAG service	Int32
bindrev-retriessent	Description: The total number of binding revocation retries sent by this system or the specified service. Triggers: Incremented when BRI is retransmitted by MAG service Availability: per MAG service	Int32
bindrev-ackrcvd	Description: The total number of binding revocation acknowledgements received by this system or the specified service. Triggers: Incremented when BRA is received by MAG service Availability: per MAG service	Int32
bindrev-notacked	Description: The total number of binding revocations sent, but not acknowledged, by this system or the specified service. Triggers: Incremented when session is deleted after max BRI retires without receiving ACK Availability: per MAG service	Int32
bindrev-rcvd	Description: The total number of binding revocations received by this system or the specified service. Triggers: Incremented when BRI is received by MAG service Availability: per MAG service	Int32

Variables	Description	Data Type
bindrev-acksent	Description: The total number of binding revocation acknowledgements sent by this system or the specified service. Triggers: Incremented when BRA is sent by MAG service Availability: per MAG service	Int32
rcvdbindrevtrig-reserved	Description: The total number of binding revocation trigger reasons received - reserved. Triggers: Incremented when BRI is received with trigger reason - Reserved Availability: per MAG service	Int32
rcvdbindrevtrig-unspecified	Description: The total number of binding revocation trigger reasons received - unspecified. Triggers: Incremented when BRI is received with trigger reason - Unspecified Availability: per MAG service	Int32
rcvdbindrevtrig-admin	Description: The total number of binding revocation trigger reasons received - administrative reason. Triggers: Incremented when BRI is received with trigger reason - Administrative reason Availability: per MAG service	Int32
rcvdbindrevtrig-maghoffsameatt	Description: The total number of binding revocation trigger reasons received - inter-MAG handoff-same ATT. Triggers: Incremented when BRI is received with trigger reason - Inter MAG Handoff - same Access Type Availability: per MAG service	Int32
rcvdbindrevtrig-maghoff-unknown	Description: The total number of binding revocation trigger reasons received - inter-MAG - unknown handoff. Triggers: Incremented when BRI is received with trigger reason - Inter MAG - unknown handoff Availability: per MAG service	Int32
rcvdbindrevtrig-maghoff-diffatt	Description: The total number of binding revocation trigger reasons received - inter-MAG handoff-diff ATT. Triggers: Incremented when BRI is received with trigger reason - Inter MAG Handoff - diff Access type Availability: per MAG service	Int32
rcvdbindrevtrig-perpeer	Description: The total number of binding revocation trigger reasons received - per-peer policy. Triggers: Incremented when BRI is received with trigger reason - Per peer policy Availability: per MAG service	Int32
rcvdbindrevtrig-nodelocal	Description: The total number of binding revocation trigger reasons received - revoking node local policy. Triggers: Incremented when BRI is received with trigger reason - Node local policy Availability: per MAG service	Int32
rcvdbindrevtrig-userinitssess	Description: The total number of binding revocation trigger reasons received - user initiated session term. Triggers: Incremented when BRI is received with trigger reason - User Initiated Session Termination Availability: per MAG service	Int32

Variables	Description	Data Type
rcvdbindrevtrig-accessnwssess	Description: The total number of binding revocation trigger reasons received - access network session term. Triggers: Incremented when BRI is received with trigger reason - Access network initiated Term Availability: per MAG service	Int32
rcvdbindrevtrig-ipv4hoabind	Description: The total number of binding revocation trigger reasons received - IPv4 HoA binding only. Triggers: Incremented when BRI is received with trigger reason - IPv4 HoA binding only Availability: per MAG service	Int32
rcvdbindrevtrig-syncebc	Description: The total number of binding revocation trigger reasons received - out-of sync BCE state. Triggers: Incremented when BRI is received with trigger reason - BCE Out of Sync Availability: per MAG service	Int32
rcvdbindrevtrig-unknown	Description: The total number of binding revocation trigger reasons received - unknown. Triggers: Incremented when BRI is received with trigger reason - Unknown Availability: per MAG service	Int32
sentrevack-success	Description: The total number of revocation ACK status sent - success. Triggers: Incremented when BRA is sent with status Success Availability: per MAG service	Int32
sentrevack-partialsuccess	Description: The total number of revocation ACK status sent - partial-success. Triggers: Incremented when BRA is sent with status Partial Success Availability: per MAG service	Int32
sentrevack-nobinding	Description: The total number of revocation ACK status sent - binding-does-not-exist. Triggers: Incremented when BRA is sent with status Binding Does Not exist Availability: per MAG service	Int32
sentrevack-noipv4hoabind	Description: The total number of revocation ACK status sent - no IPv4-HoA-bind. Triggers: Incremented when BRA is sent with status No IPv4 HoA Binding Availability: per MAG service	Int32
sentrevack-revocnotauth	Description: The total number of revocation ACK status sent - global-revoc-not-authorized. Triggers: Incremented when BRA is sent with status Global Revoc Not Authorized Availability: per MAG service	Int32
sentrevack-bindingnotidentified	Description: The total number of revocation ACK status sent - cannot-identify-binding. Triggers: Incremented when BRA is sent with status Cannot Identify binding Availability: per MAG service	Int32
sentrevack-revocfailmnattach	Description: The total number of revocation ACK status sent - revoc-failed-MN-attached. Triggers: Incremented when BRA is sent with status Revoc Failed MN Attached Availability: per MAG service	Int32
sentrevack-unknown	Description: The total number of revocation ACK status sent - unknown. Triggers: Incremented when BRA is sent with status unknown Availability: per MAG service	Int32

Variables	Description	Data Type
bindrev-discardtotal	Description: The total number of binding revocation acknowledgements received and discarded by this system or the specified service. Triggers: Incremented when BRI is discarded Availability: per MAG service	Int32
bindrev-discardsessnotfound	Description: The total number of binding revocation acknowledgements received and discarded, due to a session not found condition, by this system or the specified service. Triggers: Incremented when BRI is discarded due to session not found Availability: per MAG service	Int32
bindrev-discardbadreq	Description: The total number of binding revocation acknowledgements received and discarded, due to a badly formed request condition, by this system or the specified service. Triggers: Incremented when BRI is discarded due to malformed request Availability: per MAG service	Int32
bindrev-discarddecode	Description: The total number of binding revocation acknowledgements received and discarded, due to a decode error condition, by this system or the specified service. Triggers: Incremented when BRI is discarded due to decode failure Availability: per MAG service	Int32
bindrev-discardchecksum	Description: The total number of binding revocation acknowledgements received and discarded, due to a checksum error condition, by this system or the specified service. Triggers: Incremented when BRI is discarded due to checksum error Availability: per MAG service	Int32
bindrev-discardmsgtype	Description: The total number of binding revocation acknowledgements received and discarded, due to an invalid message type condition, by this system or the specified service. Triggers: Incremented when BRI is discarded due to invalid message type Availability: per MAG service	Int32
bindrev-discardnomemory	Description: The total number of binding revocation acknowledgements received and discarded, due to insufficient memory, by this system or the specified service. Triggers: Incremented when BRI is discarded due to memory alloc failure Availability: per MAG service	Int32
rxpackets	Description: The total number of packets received by this system. Triggers: Incremented when tunneled data packet is received Availability: per MAG service	Int32
rxpackets-6in6	Description: The total number of IPv6-in-IPv6 tunnel packets received by this system. Triggers: Incremented when tunneled IPv6 in IPv6 encapsulated data packet is received Availability: per MAG service	Int32
rxpackets-4in6	Description: The total number of IPv4-in-IPv6 tunnel packets received by this system or the specified service. Triggers: Incremented when tunneled IPv4 in IPv6 encapsulated data packet is received Availability: per MAG service	Int32
rxpackets-ipv6greipv4	Description: The total number of IPv4-in-IPv6 GRE tunnel packets received by this system or the specified service. Triggers: Incremented when tunneled IPv4 in IPv6 GRE encapsulated data packet is received Availability: per MAG service	Int32

Variables	Description	Data Type
rxpackets-ipv6greipv6	Description: The total number of IPv6-in-IPv6 GRE tunnel packets received by this system or the specified service. Triggers: Incremented when tunneled IPv6 in IPv6 GRE Encapsulated data packet is received Availability: per MAG service	Int32
rxoctets	Description: The total number of octets received by this system. Triggers: Incremented with number of bytes received when tunneled data packet is received Availability: per MAG service	Int32
rxoctets-6in6	Description: The total number of IPv6-in-IPv6 tunnel octets received by this system. Triggers: Incremented with number of IPv6 in IPv6 bytes received when tunneled data packet is received Availability: per MAG service	Int32
rxoctets-4in6	Description: The total number of IPv4-in-IPv6 tunnel octets received by this system or the specified service. Triggers: Incremented with number of IPv4 in IPv6 bytes received when tunneled data packet is received Availability: per MAG service	Int32
rxoctets-ipv6greipv4	Description: The total number of IPv4-in-IPv6 GRE tunnel octets received by this system or the specified service. Triggers: Incremented with number of IPv4 in IPv6 GRE bytes received when tunneled data packet is received Availability: per MAG service	Int32
rxoctets-ipv6greipv6	Description: The total number of IPv6-in-IPv6 GRE tunnel octets received by this system or the specified service. Triggers: Incremented with number of IPv6 in IPv6 GRE bytes received when tunneled data packet is received Availability: per MAG service	Int32
dataerror	Description: The total number of data errors received by this system. Triggers: Incremented when error is encountered on processing data packet received from the tunnel Availability: per MAG service	Int32
dataerror-proto	Description: The total number of protocol type data errors received by this system. Triggers: Incremented when packet received with invalid protocol type Availability: per MAG service	Int32
dataerror-invpklen	Description: The total number of invalid packet length data errors received by this system. Triggers: Incremented when packet received with invalid length Availability: per MAG service	Int32
dataerror-noess	Description: The total number of no session found data errors received by this system. Triggers: Incremented when packet received with session not found Availability: per MAG service	Int32

Variables	Description	Data Type
txpackets	Description: The total number of packets sent by this system. Triggers: Incremented when tunneled datapacket is sent Availability: per MAG service	Int32
txpackets-6in6	Description: The total number of IPv6-in-IPv6 tunnel packets sent by this system. Triggers: Incremented when tunneled IPv6 in IPv6 encapsulated datapacket is sent Availability: per MAG service	Int32
txpackets-4in6	Description: The total number of IPv4-in-IPv6 tunnel packets sent by this system or the specified service. Triggers: Incremented when tunneled IPv4 in IPv6 encapsulated datapacket is sent Availability: per MAG service	Int32
txpackets-ipv6greipv4	Description: The total number of IPv4-in-IPv6 GRE tunnel packets sent by this system or the specified service. Triggers: Incremented when tunneled IPv4 in IPv6 GRE encapsulated datapacket is sent Availability: per MAG service	Int32
txpackets-ipv6greipv6	Description: The total number of IPv6-in-IPv6 GRE tunnel packets sent by this system or the specified service. Triggers: Incremented when tunneled IPv6 in IPv6 GRE encapsulated data packet is sent Availability: per MAG service	Int32
txoctets	Description: The total number of octets sent by this system. Triggers: Incremented with number of bytes sent when tunneled datapacket is sent Availability: per MAG service	Int32
txoctets-6in6	Description: The total number of IPv6-in-IPv6 tunnel octets sent by this system. Triggers: Incremented with number of IPv6 in IPv6 bytes sent when tunneled data packet is sent Availability: per MAG service	Int32
txoctets-4in6	Description: The total number of IPv4-in-IPv6 tunnel octets sent by this system or the specified service. Triggers: Incremented with number of IPv4 in IPv6 bytes sent when tunneled data packet is sent Availability: per MAG service	Int32
txoctets-ipv6greipv4	Description: The total number of IPv4-in-IPv6 GRE tunnel octets sent by this system or the specified service. Triggers: Incremented with number of IPv4 in IPv6 GRE bytes sent when tunneled data packet is sent Availability: per MAG service	Int32
txoctets-ipv6greipv6	Description: The total number of IPv6-in-IPv6 GRE tunnel octets sent by this system or the specified service. Triggers: Incremented with number of IPv6 in IPv6 GRE bytes sent when tunneled data packet is sent Availability: per MAG service	Int32
disc	Description: The total number of disconnects initiated by this system. Triggers: Incremented when MAG session disconnects Availability: per MAG service	Int32

Variables	Description	Data Type
disclifetime	Description: The total number of disconnects due to lifetime expiry initiated by this system. Triggers: Incremented when MAG session is disconnected due to lifetime expiry Availability: per MAG service	Int32
discaccessinit	Description: The total number of disconnects due to de-registrations initiated by this system or the specified service. Triggers: Incremented when MAG session is disconnected due to access initiated term Availability: per MAG service	Int32
discadmin	Description: The total number of disconnects due to admin drops initiated by this system. Triggers: Incremented when MAG session disconnects due to Admin reasons Availability: per MAG service	Int32
discother	Description: The total number of disconnects due to “other reasons” initiated by this system. Triggers: Incremented when MAG session is disconnected due to misc reasons Availability: per MAG service	Int32
disclmarevoc	Description: The total number of disconnects due to LMA revocations received by this system or the specified service. Triggers: Incremented when MAG session disconnects due to revocation from LMA Availability: per MAG service	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 42

MAP Schema Statistics

The MAP (Mobile Application Part [SS7]) schema provides operational statistics that can be used for monitoring and troubleshooting the following products: SCM (E-CSCF)

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 42. Bulk Statistic Variables in the MAP Schema

Variables	Description	Data Type
vpnname	Indicates the name of VPN context in which the MAP service is configured. This is a stat key variable.	String
vpnid	Indicates the identifier of the VPN context in which the MAP service is configured. This is a stat key variable.	Int32

Variables	Description	Data Type
servname	Indicates the name of the MAP service for which these statistics are collected. This is a stat key variable.	String
map-open-req-tx	Total number of mobile application part (MAP) open requests sent.	Int32
map-open-req-rx	Total number of mobile application part (MAP) open requests received.	Int32
map-open-rsp-tx	Total number of MAP open response sent.	Int32
map-open-rsp-rx	Total number of MAP open response received.	Int32
map-close-tx	Total number of MAP close response sent.	Int32
map-close-rx	Total number of MAP close response received.	Int32
map-abort-tx	Total number of MAP abort request sent.	Int32
map-abort-rx	Total number of MAP abort request received.	Int32
map-auth-req-tx	Description: Total number of Send Authentication Request messages transmitted to HLR. Triggers: Counter increments when a MAP Send Authentication Request is initiated from SGSN. Availability: per MAP service	Int32
map-auth-succes	Total number of MAP authentication successful.	Int32
map-auth-fail	Description: Total number of User Error / Provider Error received in response to SAI request. Triggers: Counter increments when User Error / Provider Error is received from HLR. Availability: per MAP service	Int32
map-auth-timeouts-rcvd	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments when there is no response from the HLR for map-auth-fail-rep-req-tx message initiated from SGSN. Availability: per MAP service	Int32
map-imei-req-tx	Description: Total number of MAP Check IMEI requests initiated towards EIR. Triggers: Counter increments when MAP CHECK IMEI Request is sent. Availability: per MAP service	Int32
map-imei-succes	Description: Total number of successful responses for MAP Check IMEI requests. Triggers: Counter increments when MAP CHECK IMEI Request is sent. Availability: per MAP service	Int32
map-imei-fail	Description: Total number of failure responses for MAP Check IMEI requests received from EIR. Triggers: Counter increments when MAP Return Error / Provider Error is received in response. Availability: per MAP service	Int32
map-imei-timeout	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments when there is no response from HLR. Availability: per MAP service	Int32
map-gprs-update-loc-req-tx	Description: Total number of UGL (GPRS Update Location) request initiated towards HLR. Triggers: Counter increments when UGL request is sent to HLR. Availability: per MAP service	Int32

Variables	Description	Data Type
map-gprs-update-loc-rsp-tx	Description: Total number of UGL (GPRS Update Location) request initiated towards HLR. Triggers: Counter increments when UGL request is sent to HLR. Availability: per MAP service	Int32
map-gprs-update-loc-err-tx	Description: Total number of Failure response (User Error/Provider Error) messages received in response to UGL request. Triggers: Counter increments when MAP Return Error / Provider Error is received to UGL request. Availability: per MAP service	Int32
map-gprs-update-loc-timeouts-rx	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments if there is no response from HLR. Availability: per MAP service	Int32
map-sub-loc-rpt-req-tx	Description: Total Number of SLR (Subscriber Location Report) request initiated towards GMLC. Triggers: Counter increments when SLR request is sent to GMLC. Availability: per MAP service	Int32
map-sub-loc-rpt-rsp-tx	Description: Total Number of successful response messages sent in response to SLR request. Triggers: Counter increments when successful response is received from GMLC. Availability: per MAP service	Int32
map-sub-loc-rpt-err-tx	Description: Total Number of Failure response (User Error/Provider Error) messages received in response to SLR request. Triggers: Counter increments when MAP Return Error/Provider Error is received to SLR request. Availability: per MAP service	Int32
map-sub-loc-rpt-timeouts-rx	Description: Total Number of timeouts that occurred while waiting for response to SLR request from GMLC. Triggers: Counter increments if there is no response to SLR request from GMLC. Availability: per MAP service	Int32
map-prov-sub-loc-req-rx	Description: Total Number of PSL (Provide Subscriber Location) request received from GMLC. Triggers: Counter increments when MAP PSL request is received from GMLC. Availability: per MAP service	Int32
map-prov-sub-loc-rsp-tx	Description: Total Number of successful PSL response messages sent to GMLC. Triggers: Counter increments when successful response is sent to GMLC. Availability: per MAP service	Int32
map-prov-sub-loc-err-tx	Description: Total Number of error response messages sent to GMLC. Triggers: Counter increments when MAP Return Error is sent to GMLC. Availability: per MAP service	Int32
map-cancel-loc-req-rx	Description: Total number of Cancel Location Request received from HLR. Triggers: Counter increments when MAP Cancel Location Request is received. Availability: per MAP service	Int32
map-cancel-loc-rsp-tx	Description: Total number of successful Cancel Location Response messages sent to HLR. Triggers: Counter increments when successful response is sent to HLR. Availability: per MAP service	Int32

Variables	Description	Data Type
map-cancel-loc-err-tx	Description: Total number of Error response messages sent to HLR. Triggers: Counter increments when MAP Return Error is sent to HLR. Availability: per MAP service	Int32
map-del-subscription-req-rx	Description: Total number of Delete Subscription Data Request received from HLR. Triggers: Counter increments when MAP Delete Subscription Data (DSD) message is received. Availability: per MAP service	Int32
map-del-subscription-rsp-tx	Description: Total number of successful responses for Delete Subscription Data request sent to HLR. Triggers: Counter increments when MAP Delete Subscription Data (DSD) message is received. Availability: per MAP service	Int32
map-del-subscription-ret-tx	Description: Total number of Error responses sent for Delete Subscription Data (DSD) request received. Triggers: Counter increments when failure response is sent to HLR. Availability: per MAP service	Int32
map-insert-subscription-rcvd	Total number of insert subscriber data requests received by MAP.	Int32
map-standalone-insert-subscription-rcvd	Total number of standalone insert subscriber data requests received by MAP.	Int32
map-insert-subscription-rsp-tx	Total number of insert subscriber data requests sent by MAP.	Int32
map-insert-subscription-err-tx	Total number of insert subscriber data failure response sent by MAP.	Int32
map-auth-failure-report-req-tx	Description: Total number of Authentication Failure Report Request messages transmitted by MAP. Triggers: Counter increments when a message is initiated to inform HLR that certain vectors had problem in authenticating with the MS. Availability: per MAP service	Int32
map-auth-failure-report-rsp-rx	Description: Total number of Authentication Failure Report Request messages received by MAP. Triggers: Counter increments when successful response is received in response to map-auth-failure-report-req-tx. Availability: per MAP service	Int32
map-auth-failure-report-err-rx	Description: Total number of User Error and Provider Error received for the Authentication Failure Report Request sent to HLR. Triggers: Counter increments when MAP Return Error/Provider Error is received in response to map-auth-failure-report-req-tx message. There will be no effect on the call due to this. Availability: per MAP service	Int32
map-auth-failure-report-timeouts-rcvd	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments when MAP Return Error/ Provider Error is received in response to map-auth-failure-report-req-tx. There will be no effect on the call due to this. Availability: per MAP service	Int32
map-purge-req-tx	Description: Total number of MAP Purge Request messages initiated towards HLR. Triggers: Counter increments when MAP Purge Request is transmitted. Availability: per MAP service	Int32

Variables	Description	Data Type
map-purge-success	Description: Total number of successful MAP Purge Request messages sent to HLR. Triggers: Counter increments when successful response is received from HLR. Availability: per MAP service	Int32
map-purge-fail	Description: Total number of Failure response received from HLR. Triggers: Counter increments when MAP Return Error / Provider Error is received in response. Availability: per MAP service	Int32
map-purge-timeouts-rcvd	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments when there is no response from HLR. Availability: per MAP service	Int32
map-hlr-reset-rcvd	Total number of HLR reset indicator received by MAP.	Int32
map-mo-fwd-req-sent	Total number of mobile originated forward request messages sent to MAP.	Int32
map-mo-fwd-rsp-rcvd	Total number of mobile originated forward response messages received from MAP.	Int32
map-mo-fwd-rsp-failed	Total number of mobile originated forward response messages failed at MAP.	Int32
map-mo-fwd-rsp-time-out	Total number of mobile originated forward response messages timed-out at MAP.	Int32
map-mt-fwd-req-sent	Total number of mobile terminated forward request messages sent to MAP.	Int32
map-mt-fwd-rsp-rcvd	Total number of mobile terminated forward request messages received from MAP.	Int32
map-mt-fwd-rsp-failed	Total number of mobile terminated forward response messages failed at MAP.	Int32
map-ready-for-sm-req	Total number of MAP ready for session management request received.	Int32
map-ready-for-sm-rsp	Total number of MAP ready for session management request response received.	Int32
map-ready-for-sm-rsp-failed	Total number of MAP ready for session management requests failed.	Int32
map-ready-for-sm-rsp-time-out	Total number of MAP ready for session management requests timed-out.	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 43

MIPv6HA Schema Statistics

The MIPv6HA schema provides operational statistics that can be used for monitoring and troubleshooting the following products: All

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 43. Bulk Statistic Variables in the MIPv6 HA Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the LAC service. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the LAC service. This is an internal reference number. This is a key variable.	Int32
servname	Displays the name of the LAC service for which the statistics are displayed. This is a key variable.	String
servid	The identification number of the MIPv6 HA service for which the statistics are displayed. This is a key variable.	Int32
num-subscriber	The current total number of MIPv6 HA sessions.	Int32
aaa-attempt	The number of authentication requests attempted on receiving a bind update request.	Ctr32
aaa-success	The number of successful authorization attempts.	Ctr32
aaa-totfail	The number of failed authorization attempts.	Ctr32
aaa-actauthfail	The authorization attempt failure count due to access rejects from AAA.	Ctr32
aaa-misauthfail	The authorization attempt failure s due to other reasons like internal error or AAA response timeout.	Ctr32
bindupdrec-totrec	The total number of MIPv6 bind update requests received.	Ctr32
bindupdrec-totacc	The total number of MIPv6 bind update requests accepted.	Ctr32
bindupdrec-totdeny	The total number of MIPv6 bind update requests denied.	Ctr32
bindupdrec-totdisc	The total number of MIPv6 bind update requests discarded.	Ctr32
bindupdrec-totcongdiscreq	The total number of MIPv6 bind update requests discarded because of congestion.	Ctr32
ibindupdreq-receive	The total number of initial bind update requests received.	Ctr32
ibindupdreq-accept	The total number of initial bind update requests accepted.	Ctr32
ibindupdreq-deny	The total number of initial bind update requests denied.	Ctr32
rbindupdreq-receive	The total number of renew bind update requests received.	Ctr32
rbindupdreq-accept	The total number of renew bind update requests accepted.	Ctr32
rbindupdreq-deny	The total number of renew bind update requests denied.	Ctr32
deregreq-receive	The total number of dereg bind update requests received.	Ctr32
deregreq-accept	The total number of dereg bind update requests accepted.	Ctr32
deregreq-deny	The total number of dereg bind update requests denied.	Ctr32
horeq-receive	The total number of handoff bind update requests received. A handoff bind update request is a bind update request received for the same session (NAI/HA/HoA) with a new CoA.	Ctr32
horeq-accept	The total number of handoff requests accepted.	Ctr32
horeq-deny	The total number of handoff requests denied.	Ctr32
bindacksent-total	The total number of MIPv6 binding acknowledgement messages sent.	Ctr32

Variables	Description	Data Type
bindacksent-acceptreg	The total number of MIPv6 binding acknowledgement replies sent.	Ctr32
bindacksent-acceptdereg	The total number of MIPv6 dereg replies sent (bind acknowledgement with a lifetime of zero).	Ctr32
bindacksent-deny	The total number of denied bind acknowledgement replies sent.	Ctr32
denyreason-badreq	The total number of bind updates denied with status code 81H due to poorly formed bind update request.	Ctr32
denyreason-mismatchid	The total number of bind update denied with status code 90H (mismatched id).	Ctr32
denyreason-mnauthfail	The total number of bind update denied with status code 92H (mobile auth failure).	Ctr32
denyreason-admprohibit	The total number of bind update denied with status code 81H (Admin prohibited).	Ctr32
denyreason-noresource	The total number of bind update denied with status code 82H (Insufficient resources).	Ctr32
denyreason-simbindexceed	The total number of bind update denied with status code 82H because simultaneous binding limit is exceeded.	Ctr32
denyreason-unspereason	The total number of bind update denied with status code 80H (Reason Unspecified).	Ctr32
denyreason-msgidrequire	The total number of bind update denied with status code 91H (Mesg-Id-Required).	Ctr32
denyreason-dadfail	The total number of bind update denied with status code 86H (Duplicate Address Detection failed).	Ctr32
denyreason-nohomesubnet	The total number of bind update denied with status code 84H (Not Home Subnet).	Ctr32
denyreason-seqoutwindow	The total number of bind update denied with status code 87H (Sequence number Out of Window).	Ctr32
denyreason-regchadisallow	The total number of bind update denied with status code 8BH (Registration Type change disallowed).	Ctr32
datareceive-totpkt	The total number of tunneled data packets received.	Ctr32
datareceive-totpkt6in6	The total number of ipv6-ipv6 tunneled data packets received.	Ctr32
datareceive-totbyte	The total byte count of the tunnel data received	Ctr32
datareceive-totbyte6in6	The total byte count of ipv6-ipv6 tunneled data received	Ctr32
datareceive-errorprotocol	The total number of packets received with protocol type error.	Ctr32
datareceive-errorinvpkt	The total number of invalid data packets received	Ctr32
datareceive-errornosess	The total number of data packets received for which session was not found.	Ctr32

■ Common Syntax Options

Variables	Description	Data Type
datasent-totpkt	The total number of tunnel data packet sent	Ctr32
datasent-totpkt6in6	The total number of ipv6-ipv6 tunneled data packets sent	Ctr32
datasent-totbyte	The total byte count of tunneled data sent	Ctr32
datasent-totbyte6in6	The total byte count for ipv6-ipv6 tunneled data sent	Ctr32
disconnect-lifetimeexp	The total number of session disconnected due to lifetime expiry	Ctr32
disconnect-deregistration	The total number of disconnects due to deregistration from MN.	Ctr32
disconnect-admdrop	The total number of sessions disconnected administratively.	Ctr32
disconnect-othreason	The total number of sessions disconnects due to other reasons.	Ctr32
icmpv6-toobigreceive	The total number of ICMPv6 Packet too big received for tunneled packets originating within tunnel.	Ctr32
icmpv6-toobigforward	The total number of ICMPv6 packet too big forwarded messages	Ctr32
total-subscriber		Ctr32
admprohreason-badreq	Number of updates denied for an Admin prohibited reason: bad request	Ctr32
insufresource-badreq	Number of binding updates denied	Ctr32
bindacksent-senderror	The total number of binding acknowledgements sent with a send error	Ctr32
admprohreason-congcondenied	Number of updates denied for an Admin prohibited reason: congestion control denied	Ctr32
icmpv6-toobigdrop	Number of ICMPv6 packets dropped because they are too big and need to be fragmented.	Ctr32
bindupddiscard-congdisc	Number of binding updates discarded because HAMGR is configured to drop packets on congestion	Ctr32
bindupddiscard-chkerror	Number of bind updates discarded because of a checksum error on binding update.	Ctr32
bindupddiscard-iniauthpend	Number of bind updates discarded because initialization authorization is pending when retry binding updates are received	Ctr32
bindupddiscard-sessnotfound	Number of bind updates discarded because hamgr forwards RRQ for existing session but session not found in Sessmgr	Ctr32
bindupddiscard-hamgmotrea	Number of bind updates discarded because HAMGR is not yet ready and packet buffering limit is exceeded	Ctr32
bindupddiscard-decfail	Number of binding updates discarded because the binding update packet decoding has failed in HAMGR.	Ctr32
bindupddiscard-invbuflen	Number of bind updates discarded because there is mismatch in the binding update packet buffer length and expected length.	Ctr32
admprohreason-authoptmiss	Number of bind updates denied because there are Admin Prohibited Reasons-MN-AAA Auth Option Missing.	String

Variables	Description	Data Type
admprohreason-hbitnotset	Number of bind updates denied because there are Admin Prohibited Reasons-H-bit Not Set.	String
admprohreason-invaaspi	Number of bind updates denied because there are Admin Prohibited Reasons-Invalid MN-AAA Option SPI.	String
admprohreason-invhaspi	Number of bind updates denied because there are Admin Prohibited Reasons-Invalid MN-HA Option SPI.	String
admprohreason-polrej	Number of bind updates denied because there are Admin Prohibited Reasons-Policy Rejected.	String
admprohreason-notauth	Number of bind updates denied because there are Admin Prohibited Reasons-HoA Not Authorized.	String
admprohreason-noperm	Number of bind updates denied because there are Admin Prohibited Reasons-No Permission.	String
insufresource-nosessmgr	Number of bind updates denied because there are Insufficient Resource Reasons-No Session Manager.	String
insufresource-nomem	Number of bind updates denied because there are Insufficient Resource Reasons-No Memory.	String
insufresource-sessmgrrej	Number of bind updates denied because there are Insufficient Resource Reasons-Session Manager Rejected.	String
insufresource-ipqexc	Number of bind updates denied because there are Insufficient Resource Reasons-Input-Q Exceeded.	String
insufresource-simbindexc	Number of bind updates denied because there are Insufficient Resource Reasons-Simul Bindings Exceeded.	String
tun-conn-attempt	The total number of tunnel connection attempts.	Int32
tun-conn-success	The total number of successful tunnel connections.	Int32
tun-conn-fail	The total number of failed tunnel connections.	Int32
tun-conn-curactive	The total number of currently active tunnel connections.	Int32
sess-attempts	The total number of session connection attempts.	Int32
sess-successful	The total number of successful session connections.	Int32
sess-failed	The total number of failed session connections.	Int32
sess-curactive	The total number of currently active session connections.	Int32
sess-intrapdsnho-attempt	The total number of Intra-PDSN Hand-Offs connection attempts.	Int32
sess-intrapdsnho-success	The total number of successful Intra-PDSN Hand-Offs connections.	Int32
sess-intrapdsnho-failed	The total number of failed Intra-PDSN Hand-Offs connections.	Int32
sess-interpdsnho-attempt	The total number of Inter-PDSN Hand-Offs connection attempts.	Int32
recv-err-malformed	The total number of Tunnel Receive Control Packet errors experienced due to malformed packets.	Int32

■ Common Syntax Options

Variables	Description	Data Type
recv-err-ctrlfield	The total number of Tunnel Receive Control Packet errors experienced due to control field errors.	Int32
recv-err-pktlen	The total number of Tunnel Receive Control Packet errors experienced due to packet length errors.	Int32
recv-err-avplen	The total number of Tunnel Receive Control Packet errors experienced due to AVP length errors.	Int32
recv-err-protover	The total number of Tunnel Receive Control Packet errors experienced due to protocol version errors.	Int32
recv-err-md5	The total number of Tunnel Receive Control Packet errors experienced due to MD5 errors.	Int32
recv-err-invattr	The total number of Tunnel Receive Control Packet errors experienced due to invalid attribute errors.	Int32
recv-err-unkattr	The total number of Tunnel Receive Control Packet errors experienced due to unknown attribute errors.	Int32
recv-err-invsessid	The total number of Tunnel Receive Control Packet errors experienced due to invalid session ID errors.	Int32
recv-err-invstate	The total number of Tunnel Receive Control Packet errors experienced due to invalid state errors.	Int32
recv-err-unkmsg	The total number of Tunnel Receive Control Packet errors experienced due to unknown message errors.	Int32
recv-err-unmatchpktlen	The total number of Tunnel Receive Control Packet errors experienced due to unmatched packet length errors.	Int32
recv-err-invtunid	The total number of Tunnel Receive Control Packet errors experienced due to invalid tunnel length errors.	Int32
tun-genclear	The total number of tunnels cleared normally.	Int32
tun-ctrlconnexists	The total number of tunnel disconnects/failures experienced due to a pre-existing control connection.	Int32
tun-unauth	The total number of tunnel disconnects/failures experienced due to unauthorized errors.	Int32
tun-badproto	The total number of tunnel disconnects/failures experienced due to bad protocol errors.	Int32
tun-reqshutdown	The total number of tunnel disconnects experienced due to requester shutdown.	Int32
tun-statemacherr	The total number of tunnel disconnects/failures experienced due to state machine errors.	Int32
tun-badlen	The total number of tunnel disconnects/failures experienced due to wrong length errors.	Int32
tun-oor	The total number of tunnel disconnects/failures experienced due to out-of-range errors.	Int32
tun-noresource	The total number of tunnel disconnects/failures experienced due to insufficient resources.	Int32
tun-vendspec	The total number of tunnel disconnects/failures experienced due to vendor-specific errors.	Int32
tun-tryanotherlns	The total number of tunnel disconnects/failures experienced resulting in “Try Another LNS” message generation.	Int32

Variables	Description	Data Type
tun-unkavp	The total number of tunnel disconnects/failures experienced due to unknown AVP with M-bit errors.	Int32
tun-ipsecdisc	The total number of tunnel disconnects experienced due to IPSEC.	Int32
tun-ipsecfail	The total number of tunnel failures experienced due to IPSEC.	Int32
tun-license	The total number of tunnel disconnects/failures experienced due to license exceeded errors.	Int32
tun-newcallpoldisc	The total number of tunnel disconnects experienced due to new call policies.	Int32
tun-maxretry	The total number of tunnel disconnects/failures experienced due to the maximum number of retries being exceeded.	Int32
tun-syslimit	The total number of tunnel disconnects/failures experienced due to reaching the system tunnel limit.	Int32
tun-miscerr	The total number of tunnel disconnects/failures experienced due to miscellaneous errors.	Int32
sess-nogeneral	The total number of sessions for which there were no general errors experienced.	Int32
sess-admin	The total number of session disconnects/failures experienced due to administrative reasons.	Int32
sess-lossofcarr	The total number of session disconnects/failures experienced due to loss of carrier.	Int32
sess-remoteadmin	The total number of session disconnects/failures experienced due to remote administrative reasons.	Int32
sess-nofactemp	The total number of session disconnects/failures experienced due to temporary no facility available errors.	Int32
sess-nofacperm	The total number of session disconnects/failures experienced due to permanent no facility available errors.	Int32
sess-invdest	The total number of session disconnects/failures experienced due to invalid destination errors.	Int32
sess-nocarrier	The total number of session disconnects/failures experienced due no carrier being detected.	Int32
sess-busysig	The total number of session disconnects/failures experienced due to receipt of a busy signal.	Int32
sess-nodialtime	The total number of session disconnects/failures experienced due to receipt of no dial tone.	Int32
sess-lactimeout	The total number of session disconnects/failures experienced due to LAC timeout.	Int32
sess-noframing	The total number of session disconnects/failures experienced due to no appropriate framing.	Int32
sess-noctrlconn	The total number of session disconnects/failures experienced due to no control connection existing.	Int32
sess-badlen	The total number of session disconnects/failures experienced due to wrong length errors.	Int32
sess-oor	The total number of session disconnects/failures experienced due to out-of-range errors.	Int32
sess-noresource	The total number of session disconnects/failures experienced due to insufficient resources.	Int32
sess-invsessid	The total number of session disconnects/failures experienced due to an invalid session ID.	Int32
sess-vendspec	The total number of session disconnects/failures experienced due to vendor specific errors.	Int32
sess-tryanotherlms	The total number of session disconnects/failures experienced resulting in “Try Another LNS” message generation.	Int32

Variables	Description	Data Type
sess-unkavp	The total number of session disconnects/failures experienced due to unknown AVP with M-bit errors.	Int32
sess-maxtunnel	The total number of session disconnects/failures experienced due to reaching the maximum tunnel limit.	Int32
sess-ipsecfail	The total number of session failures experienced due to IPSEC.	Int32
sess-ipsecdisc	The total number of session disconnects experienced due to IPSEC.	Int32
sess-newcallpoldisc	The total number of session disconnects experienced due to new call policies.	Int32
sess-license	The total number of session disconnects/failures experienced due to license exceeded errors.	Int32
sess-servmismatch	The total number of session disconnects/failures experienced due to service mismatch errors.	Int32
sess-miscerr	The total number of session disconnects/failures experienced due to miscellaneous errors.	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 44

MME Schema Statistics

The MME schema provides operational statistics that can be used for monitoring and troubleshooting the following products: MME

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 44. Bulk Statistic Variables in the MME Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the MME service processing the subscriber's session. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the MME service processing subscriber's session. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	The name of the service for which MME statistics are being displayed. This is a key variable. Type: Information	String
servid	The identification number of the service configured on the system that is currently facilitating MME subscriber sessions. This is an internal reference number. This is a key variable. Type: Information	Int32
sess-cur	The current total number of sessions on the system. Type: Gauge	Int32
 Important: The following EMM event association statistics are only available in 12.0 and earlier releases.		
emmevent-assoc-attempt	The total number of EPS Mobility Management events - associations (attach) - attempted. Type: Counter	Int32
emmevent-assoc-success	The total number of EPS Mobility Management events - associations (attach) - successes. Type: Counter	Int32
emmevent-assoc-failure	The total number of EPS Mobility Management events - associations (attach) - failures. Type: Counter	Int32
emmevent-associmsi-attempt	The total number of EPS Mobility Management events - associations (attach) IMSI - attempted. Type: Counter	Int32
emmevent-associmsi-success	The total number of EPS Mobility Management events - associations (attach) IMSI - successes. Type: Counter	Int32
emmevent-associmsi-failure	The total number of EPS Mobility Management events - associations (attach) IMSI - failures. Type: Counter	Int32
emmevent-assocloguti-attempt	The total number of EPS Mobility Management events - associations (attach) local GUTI - attempted Type: Counter	Int32
emmevent-assocloguti-success	The total number of EPS Mobility Management events - associations (attach) local GUTI - successes. Type: Counter	Int32

Variables	Description	Data Type
emmevent-assoclocguti-failure	The total number of EPS Mobility Management events - associations (attach) local GUTI - failures. Type: Counter	Int32
emmevent-assocnonlocguti-attempt	The total number of EPS Mobility Management events - associations (attach) non-local GUTI - attempted. Type: Counter	Int32
emmevent-assocnonlocguti-success	The total number of EPS Mobility Management events - associations (attach) non-local GUTI - successes. Type: Counter	Int32
emmevent-assocnonlocguti-failure	The total number of EPS Mobility Management events - associations (attach) non-local GUTI - failures. Type: Counter	Int32
 Important: The previous EMM event association statistics are only available in 12.0 and earlier releases.		
emmevent-auth-attempt	The total number of EPS Mobility Management events - S1 NAS authentications - attempted. Type: Counter	Int32
emmevent-auth-success	The total number of EPS Mobility Management events - S1 NAS authentications - successes. Type: Counter	Int32
emmevent-auth-failure	The total number of EPS Mobility Management events - S1 NAS authentications - failures. Type: Counter	Int32
emmevent-iden-attempt	The total number of EPS Mobility Management events - S1 NAS identity - attempted. Type: Counter	Int32
emmevent-iden-success	The total number of EPS Mobility Management events - S1 NAS identity - successes. Type: Counter	Int32
emmevent-iden-failure	The total number of EPS Mobility Management events - S1 NAS identity - failures. Type: Counter	Int32
emmevent-sec-attempt	The total number of EPS Mobility Management events - security - attempted. Type: Counter	Int32
emmevent-sec-success	The total number of EPS Mobility Management events - security - successes. Type: Counter	Int32
emmevent-sec-failure	The total number of EPS Mobility Management events - security - failures. Type: Counter	Int32
emmevent-x2ho-attempt	The total number of EPS Mobility Management events - X2-based handovers - attempted. Type: Counter	Int32

Variables	Description	Data Type
emmevent-x2ho-success	The total number of EPS Mobility Management events - X2-based handovers - successes. Type: Counter	Int32
emmevent-x2ho-failure	The total number of EPS Mobility Management events - X2-based handovers - failures. Type: Counter	Int32
emmevent-s1ho-attempt	The total number of EPS Mobility Management events - S1-based handovers - attempted. Type: Counter	Int32
emmevent-s1ho-success	The total number of EPS Mobility Management events - S1-based handovers - successes. Type: Counter	Int32
emmevent-s1ho-failure	The total number of EPS Mobility Management events - S1-based handovers - failures. Type: Counter	Int32
 Important: The following EMM event TAU and detach statistics are only available in 12.0 and earlier releases.		
emmevent-tau-attempt	The total number of EPS Mobility Management events - all tracking area update events - attempted. Type: Counter	Int32
emmevent-tau-success	The total number of EPS Mobility Management events - all tracking area update events - successes. Type: Counter	Int32
emmevent-tau-failure	The total number of EPS Mobility Management events - all tracking area update events - failures. Type: Counter	Int32
emmevent-detach-attempt	The total number of EPS Mobility Management events - detach - attempts. Type: Counter	Int32
emmevent-detach-success	The total number of EPS Mobility Management events - detach - successes. Type: Counter	Int32
emmevent-detach-failure	The total number of EPS Mobility Management events - detach - failures. Type: Counter	Int32
 Important: The previous EMM event TAU and detach statistics are only available in 12.0 and earlier releases.		
emmevent-detachueinit-attempt	The total number of EPS Mobility Management events - user equipment initiated detach - attempts. Type: Counter	Int32

Variables	Description	Data Type
emmevent-detachueinit-success	The total number of EPS Mobility Management events - user equipment initiated detach - successes. Type: Counter	Int32
emmevent-detachueinit-failure	The total number of EPS Mobility Management events - user equipment initiated detach - failures. Type: Counter	Int32
emmevent-detachnwinit-attempt	The total number of EPS Mobility Management events - network initiated detach - attempts. Type: Counter	Int32
emmevent-detachnwinit-success	The total number of EPS Mobility Management events - network initiated detach - successes. Type: Counter	Int32
emmevent-detachnwinit-failure	The total number of EPS Mobility Management events - network initiated detach - failures. Type: Counter	Int32
emmevent-detachhssinit-attempt	The total number of EPS Mobility Management events - home subscriber service initiated detach - attempts. Type: Counter	Int32
emmevent-detachhssinit-success	The total number of EPS Mobility Management events - home subscriber service initiated detach - successes. Type: Counter	Int32
emmevent-detachhssinit-failure	The total number of EPS Mobility Management events - home subscriber service initiated detach - failures. Type: Counter	Int32
ecmevent-idlemode-attempt	The total number of EPS Connection Management events - idle mode entry events - attempted. Type: Counter	Int32
ecmevent-idlemode-success	The total number of EPS Connection Management events - idle mode entry events - successes. Type: Counter	Int32
ecmevent-idlemode-failure	The total number of EPS Connection Management events - idle mode entry events - failures. Type: Counter	Int32
ecmevent-ue-srvcreq-attempt	The total number of EPS Connection Management events - UE-initiated service requests - attempted. Type: Counter	Int32
ecmevent-ue-srvcreq-success	The total number of EPS Connection Management events - UE-initiated service requests - successes. Type: Counter	Int32
ecmevent-ue-srvcreq-failure	The total number of EPS Connection Management events - UE-initiated service requests - failures. Type: Counter	Int32

Variables	Description	Data Type
 Important: The following ECM event service request and paging statistics are only available in 12.0 and earlier releases.		
ecmevent-paging-attempt	The total number of EPS Connection Management events - paging initiation events - attempted. Type: Counter	Int32
ecmevent-paging-success	The total number of EPS Connection Management events - paging initiation events - successes. Type: Counter	Int32
ecmevent-paging-failure	The total number of EPS Connection Management events - paging initiation events - failures. Type: Counter	Int32
 Important: The previous ECM event service request and paging statistics are only available in 12.0 and earlier releases.		
emmctrlmsg-sent-cleartext	The total number of EPS Mobility Management control messages - sent - clear text messages. Type: Counter	Int32
emmctrlmsg-sent-integrity	The total number of EPS Mobility Management control messages - sent - integrity-check enabled. Type: Counter	Int32
emmctrlmsg-sent-cipher	The total number of EPS Mobility Management control messages - sent - ciphered messages. Type: Counter	Int32
emmctrlmsg-sent-retrans	The total number of EPS Mobility Management control messages - sent - retransmissions sent. Type: Counter	Int32
emmctrlmsg-sent-failure	The total number of EPS Mobility Management control messages - sent - failures. Type: Counter	Int32
emmctrlmsg-recv-cleartext	The total number of EPS Mobility Management control messages - received - clear-text messages. Type: Counter	Int32
emmctrlmsg-recv-integrity	The total number of EPS Mobility Management control messages - received - integrity-check enabled. Type: Counter	Int32
emmctrlmsg-recv-cipher	The total number of EPS Mobility Management control messages - received - ciphered messages. Type: Counter	Int32

Variables	Description	Data Type
emmctrlmsg-recv-accept	The total number of EPS Mobility Management control messages - received - accepted. Type: Counter	Int32
emmctrlmsg-recv-discard	The total number of EPS Mobility Management control messages - received - discarded. Type: Counter	Int32
emmctrlmsg-recv-denied	The total number of EPS Mobility Management control messages - received - denied. Type: Counter	Int32
emmctrlmsg-recv-decodefail	The total number of EPS Mobility Management control messages - received - decode failures. Type: Counter	Int32
emmcalls-attach-currcall	The total number of EPS Mobility Management call-line statistics - attached calls - current calls. Type: Gauge	Int32
emmcalls-attach-maxcall	The total number of EPS Mobility Management call-line statistics - attached calls - maximum calls. Type: Gauge	Int32
emmcalls-connect-currcall	The total number of EPS Mobility Management call-line statistics - connected calls - current calls. Type: Gauge	Int32
emmcalls-connect-maxcall	The total number of EPS Mobility Management call-line statistics - connected calls - maximum calls. Type: Gauge	Int32
emmcalls-idle-currcall	The total number of EPS Mobility Management call-line statistics - idle calls - current calls. Type: Gauge	Int32
emmcalls-idle-maxcall	The total number of EPS Mobility Management call-line statistics - idle calls - maximum calls. Type: Gauge	Int32
emmdisc-uedetach	The total number of EPS Mobility Management disconnect statistics - UE detached. Type: Counter	Int32
emmdisc-pgwdetach	The total number of EPS Mobility Management disconnect statistics - P-GW detached. Type: Counter	Int32
emmdisc-hssdetach	The total number of EPS Mobility Management disconnect statistics - HSS detached. Type: Counter	Int32
emmdisc-mmedetach	The total number of EPS Mobility Management disconnect statistics - MME detached. Type: Counter	Int32
emmdisc-implicitdetach	The total number of EPS Mobility Management disconnect statistics - implicit detach. Type: Counter	Int32
emmdisc-localabort	The total number of EPS Mobility Management disconnect statistics - local abort. Type: Counter	Int32

Variables	Description	Data Type
emmdisc-authfail	The total number of EPS Mobility Management disconnect statistics - authentication failures. Type: Counter	Int32
emmdisc-subparamfail	The total number of EPS Mobility Management disconnect statistics - subscription parameter failures. Type: Counter	Int32
emmdisc-otherreasons	The total number of EPS Mobility Management disconnect statistics - other reasons. Type: Counter	Int32
esmevent-pdncon-attempt	The total number of EPS Session Management events - PDN connections - attempted. Type: Counter	Int32
esmevent-pdncon-success	The total number of EPS Session Management events - PDN connections - successes. Type: Counter	Int32
esmevent-pdncon-failure	The total number of EPS Session Management events - PDN connections - failures. Type: Counter	Int32
 Important: The following ESM event PDN disconnect statistics are only available in 12.0 and earlier releases.		
esmevent-pdncon-attempt	The total number of EPS Session Management events - PDN disconnections - attempted. Type: Counter	Int32
esmevent-pdncon-success	The total number of EPS Session Management events - PDN disconnections - successes. Type: Counter	Int32
esmevent-pdncon-failure	The total number of EPS Session Management events - PDN disconnections - failures. Type: Counter	Int32
 Important: The previous ESM event PDN disconnect statistics are only available in 12.0 and earlier releases.		
esmevent-defbearact-attempt	The total number of EPS Session Management events - default bearer activations - attempted. Type: Counter	Int32
esmevent-defbearact-success	The total number of EPS Session Management events - default bearer activations - successes. Type: Counter	Int32
esmevent-defbearact-failure	The total number of EPS Session Management events - default bearer activations - failures. Type: Counter	Int32

Variables	Description	Data Type
 Important: The following ESM event dedicated bearer and bearer deactivation statistics are only available in 12.0 and earlier releases.		
esmevent-dedbearact-attempt	The total number of EPS Session Management events - dedicated bearer activations - attempted. Type: Counter	Int32
esmevent-dedbearact-success	The total number of EPS Session Management events - dedicated bearer activations - successes. Type: Counter	Int32
esmevent-dedbearact-failure	The total number of EPS Session Management events - dedicated bearer activations - failures. Type: Counter	Int32
esmevent-beardeact-attempt	The total number of EPS Session Management events - bearer deactivations - attempted. Type: Counter	Int32
esmevent-beardeact-success	The total number of EPS Session Management events - bearer deactivations - successes. Type: Counter	Int32
esmevent-beardeact-failure	The total number of EPS Session Management events - bearer deactivations - failures. Type: Counter	Int32
 Important: The previous ESM event dedicated bearer and bearer deactivation statistics are only available in 12.0 and earlier releases.		
esmctrlmsg-sent-cleartext	The total number of EPS Session Management control messages - sent - clear-text messages. Type: Counter	Int32
esmctrlmsg-sent-integrity	The total number of EPS Session Management control messages - sent - integrity-check enabled. Type: Counter	Int32
esmctrlmsg-sent-cipher	The total number of EPS Session Management control messages - sent - ciphered messages. Type: Counter	Int32
esmctrlmsg-sent-retrans	The total number of EPS Session Management control messages - sent - retransmissions sent. Type: Counter	Int32
esmctrlmsg-sent-failure	The total number of EPS Session Management control messages - sent - failures. Type: Counter	Int32

Variables	Description	Data Type
 Important: The following ESM control message statistics are only available in 12.0 and earlier releases.		
esmctrlmsg-recv-cleartext	The total number of EPS Session Management control messages - received - clear-text messages. Type: Counter	Int32
esmctrlmsg-recv-integrity	The total number of EPS Session Management control messages - received - integrity-check enabled. Type: Counter	Int32
esmctrlmsg-recv-cipher	The total number of EPS Session Management control messages - received - ciphered messages. Type: Counter	Int32
esmctrlmsg-recv-accept	The total number of EPS Session Management control messages - received - accepted. Type: Counter	Int32
esmctrlmsg-recv-discard	The total number of EPS Session Management control messages - received - discarded. Type: Counter	Int32
esmctrlmsg-recv-denied	The total number of EPS Session Management control messages - received - denied. Type: Counter	Int32
esmctrlmsg-recv-decodefail	The total number of EPS Session Management control messages - received - decode failures. Type: Counter	Int32
 Important: The previous ESM control message statistics are only available in 12.0 and earlier releases.		
sctp-transdata-init	The total number of Stream Control Transmission Protocol - transmit data - init chunks. Type: Counter	Int32
sctp-transdata-initack	The total number of Stream Control Transmission Protocol - transmit data - init acknowledge chunks. Type: Counter	Int32
sctp-transdata-shut	The total number of Stream Control Transmission Protocol - transmit data - shutdown chunks. Type: Counter	Int32
sctp-transdata-shutack	The total number of Stream Control Transmission Protocol - transmit data - shutdown acknowledge chunks. Type: Counter	Int32
sctp-transdata-cookie	The total number of Stream Control Transmission Protocol - transmit data - cookie chunks. Type: Counter	Int32

Variables	Description	Data Type
sctp-transdata-cookieack	The total number of Stream Control Transmission Protocol - transmit data - cookie acknowledge chunks. Type: Counter	Int32
sctp-transdata-data	The total number of Stream Control Transmission Protocol - transmit data - data chunks. Type: Counter	Int32
sctp-transdata-dataack	The total number of Stream Control Transmission Protocol - transmit data - data acknowledge chunks. Type: Counter	Int32
sctp-transdata-shutcomp	The total number of Stream Control Transmission Protocol - transmit data - shutdown complete chunks. Type: Counter	Int32
sctp-transdata-hb	The total number of Stream Control Transmission Protocol - transmit data - heartbeat chunks. Type: Counter	Int32
sctp-transdata-hback	The total number of Stream Control Transmission Protocol - transmit data - heartbeat acknowledge chunks. Type: Counter	Int32
sctp-transdata-abort	The total number of Stream Control Transmission Protocol - transmit data - abort chunks. Type: Counter	Int32
sctp-transdata-error	The total number of Stream Control Transmission Protocol - transmit data - error chunks. Type: Counter	Int32
sctp-recdata-init	The total number of Stream Control Transmission Protocol - receive data - init chunks. Type: Counter	Int32
sctp-recdata-initack	The total number of Stream Control Transmission Protocol - receive data - init acknowledge chunks. Type: Counter	Int32
sctp-recdata-shut	The total number of Stream Control Transmission Protocol - receive data - shutdown chunks. Type: Counter	Int32
sctp-recdata-shutack	The total number of Stream Control Transmission Protocol - receive data - shutdown acknowledge chunks. Type: Counter	Int32
sctp-recdata-cookie	The total number of Stream Control Transmission Protocol - receive data - cookie chunks. Type: Counter	Int32
sctp-recdata-cookieack	The total number of Stream Control Transmission Protocol - receive data - cookie acknowledge chunks. Type: Counter	Int32

Variables	Description	Data Type
sctp-recdata-data	The total number of Stream Control Transmission Protocol - receive data - data chunks. Type: Counter	Int32
sctp-recdata-dataack	The total number of Stream Control Transmission Protocol - receive data - data acknowledge chunks. Type: Counter	Int32
sctp-recdata-shutcomp	The total number of Stream Control Transmission Protocol - receive data - shutdown complete chunks. Type: Counter	Int32
sctp-recdata-hb	The total number of Stream Control Transmission Protocol - receive data - heartbeat chunks. Type: Counter	Int32
sctp-recdata-hback	The total number of Stream Control Transmission Protocol - receive data - heartbeat acknowledge chunks. Type: Counter	Int32
sctp-recdata-abort	The total number of Stream Control Transmission Protocol - receive data - abort chunks. Type: Counter	Int32
sctp-recdata-error	The total number of Stream Control Transmission Protocol - receive data - error chunks. Type: Counter	Int32
sctp-retransdata-init	The total number of Stream Control Transmission Protocol - retransmit data - init chunks. Type: Counter	Int32
sctp-retransdata-shut	The total number of Stream Control Transmission Protocol - retransmit data - shutdown chunks. Type: Counter	Int32
sctp-retransdata-shutack	The total number of Stream Control Transmission Protocol - retransmit data - shutdown acknowledge chunks. Type: Counter	Int32
sctp-retransdata-cookie	The total number of Stream Control Transmission Protocol - retransmit data - cookie chunks. Type: Counter	Int32
sctp-retransdata-cookieack	The total number of Stream Control Transmission Protocol - retransmit data - cookie acknowledge chunks. Type: Counter	Int32
sctp-totsent-bytes	The total number of Stream Control Transmission Protocol - total bytes sent to lower layer. Type: Counter	Int32
sctp-totrec-bytes	The total number of Stream Control Transmission Protocol - total bytes received from lower layer. Type: Counter	Int32

Variables	Description	Data Type
sctp-totsent-pkts	The total number of Stream Control Transmission Protocol - total packets sent to lower layer. Type: Counter	Int32
sctp-totrec-pkts	The total number of Stream Control Transmission Protocol - total packets received from lower layer. Type: Counter	Int32
s1ap-transdata-setupres	The total number of S1 Application Protocol - transmit data - S1 setup responses. Type: Counter	Int32
s1ap-transdata-setupresfail	The total number of S1 Application Protocol - transmit data - S1 setup response failures.	Int32
s1ap-transdata-reset	The total number of S1 Application Protocol - transmit data - reset messages. Type: Counter	Int32
s1ap-transdata-resetack	The total number of S1 Application Protocol - transmit data - reset acknowledgements. Type: Counter	Int32
s1ap-transdata-olstart	The total number of S1 Application Protocol - transmit data - overload start messages. Type: Counter	Int32
s1ap-transdata-olstop	The total number of S1 Application Protocol - transmit data - overload stop messages. Type: Counter	Int32
s1ap-transdata-mmedirinfra	The total number of S1 Application Protocol - transmit data - MME direct information transfers. Type: Counter	Int32
s1ap-transdata-paging	The total number of S1 Application Protocol - transmit data - paging messages. Type: Counter	Int32
s1ap-transdata-enbcfgupack	The total number of S1 Application Protocol - transmit data - ENodeB configuration update acknowledgements. Type: Counter	Int32
s1ap-transdata-enbcfgupdfail	The total number of S1 Application Protocol - transmit data - ENodeB configuration update failures. Type: Counter	Int32
s1ap-transdata-ctrlmsgencfail	The total number of S1 Application Protocol - transmit data - S1 AP control message failures. Type: Counter	Int32
s1ap-transdata-erabsetupreq	The total number of S1 Application Protocol - transmit data - E-RAB setup requests. Type: Counter	Int32
s1ap-transdata-erabmodreq	The total number of S1 Application Protocol - transmit data - E-RAB modify requests. Type: Counter	Int32
s1ap-transdata-erabrelcmd	The total number of S1 Application Protocol - transmit data - E-RAB release commands. Type: Counter	Int32

Variables	Description	Data Type
s1ap-transdata-ctxtsetupreq	The total number of S1 Application Protocol - transmit data - initial context setup requests. Type: Counter	Int32
s1ap-transdata-uectxrel	The total number of S1 Application Protocol - transmit data - UE context release commands. Type: Counter	Int32
s1ap-transdata-uectxtmod	The total number of S1 Application Protocol - transmit data - UE context modify requests. Type: Counter	Int32
s1ap-transdata-dlnastrans	The total number of S1 Application Protocol - transmit data - downlink NAS transports. Type: Counter	Int32
s1ap-transdata-errorind	The total number of S1 Application Protocol - transmit data - error indications. Type: Counter	Int32
s1ap-transdata-hocmd	The total number of S1 Application Protocol - transmit data - handover commands. Type: Counter	Int32
s1ap-transdata-hoprepfail	The total number of S1 Application Protocol - transmit data - handover preparation failures. Type: Counter	Int32
s1ap-transdata-horeq	The total number of S1 Application Protocol - transmit data - handover requests. Type: Counter	Int32
s1ap-transdata-hocanack	The total number of S1 Application Protocol - transmit data - handover cancel acknowledgements. Type: Counter	Int32
s1ap-transdata-pathswreqack	The total number of S1 Application Protocol - transmit data - path switch request acknowledgements. Type: Counter	Int32
s1ap-transdata-pathswreqfail	The total number of S1 Application Protocol - transmit data - path switch request failures. Type: Counter	Int32
s1ap-transdata-dlinktunnel	The total number of S1 Application Protocol - transmit data - downlink S1 CDMA2000 tunneling. Type: Counter	Int32
s1ap-transdata-tracestart	The total number of S1 Application Protocol - transmit data - trace starts. Type: Counter	Int32
s1ap-transdata-deactivtrace	The total number of S1 Application Protocol - transmit data - deactivation trace messages. Type: Counter	Int32
s1ap-transdata-mmetrans	The total number of S1 Application Protocol - transmit data - MME status transfers. Type: Counter	Int32

Variables	Description	Data Type
s1ap-transdata-locprepctrl	The total number of S1 Application Protocol - transmit data - location report control messages. Type: Counter	Int32
s1ap-transdata-encfail	The total number of S1 Application Protocol - transmit data - S1AP encode failures. Type: Counter	Int32
s1ap-recdata-setupreq	The total number of S1 Application Protocol - receive data - S1 setup requests. Type: Counter	Int32
s1ap-recdata-reset	The total number of S1 Application Protocol - receive data - resets. Type: Counter	Int32
s1ap-recdata-resetack	The total number of S1 Application Protocol - receive data - reset acknowledgements. Type: Counter	Int32
s1ap-recdata-enbdirinftrans	The total number of S1 Application Protocol - receive data - ENodeB direct information transfers. Type: Counter	Int32
s1ap-recdata-enbcfgupd	The total number of S1 Application Protocol - receive data - ENodeB configuration updates. Type: Counter	Int32
s1ap-recdata-ctrlmsgdecfail	The total number of S1 Application Protocol - receive data - S1AP control message decode failures. Type: Counter	Int32
s1ap-recdata-ctrlmsgunexpevt	The total number of S1 Application Protocol - receive data - S1AP control message unexpected events. Type: Counter	Int32
s1ap-recdata-erabsetupres	The total number of S1 Application Protocol - receive data - E-RAB setup responses. Type: Counter	Int32
s1ap-recdata-erabmodres	The total number of S1 Application Protocol - receive data - E-RAB modify responses. Type: Counter	Int32
s1ap-recdata-erabrelres	The total number of S1 Application Protocol - receive data - E-RAB release responses. Type: Counter	Int32
s1ap-recdata-erabrelind	The total number of S1 Application Protocol - receive data - E-RAB release indications. Type: Counter	Int32
s1ap-recdata-ctxtsetupres	The total number of S1 Application Protocol - receive data - initial context setup responses. Type: Counter	Int32
s1ap-recdata-ctxtsetupfail	The total number of S1 Application Protocol - receive data - initial context setup failures. Type: Counter	Int32

Variables	Description	Data Type
s1ap-recdata-uectxrelreq	The total number of S1 Application Protocol - receive data - UE context release requests. Type: Counter	Int32
s1ap-recdata-uectxrelcomp	The total number of S1 Application Protocol - receive data - UE context release completions. Type: Counter	Int32
s1ap-recdata-uectxmodres	The total number of S1 Application Protocol - receive data - UE context modify responses. Type: Counter	Int32
s1ap-recdata-uectxmodfail	The total number of S1 Application Protocol - receive data - UE context modify failures. Type: Counter	Int32
s1ap-recdata-inituemsq	The total number of S1 Application Protocol - receive data - initial UE messages. Type: Counter	Int32
s1ap-recdata-ulinknastp	The total number of S1 Application Protocol - receive data - uplink NAS transports. Type: Counter	Int32
s1ap-recdata-nasnondelind	The total number of S1 Application Protocol - receive data - NAS non-delivery indications. Type: Counter	Int32
s1ap-recdata-errorind	The total number of S1 Application Protocol - receive data - error indications. Type: Counter	Int32
s1ap-recdata-horeqack	The total number of S1 Application Protocol - receive data - handover request acknowledgements. Type: Counter	Int32
s1ap-recdata-hocancel	The total number of S1 Application Protocol - receive data - handover cancellations. Type: Counter	Int32
s1ap-recdata-horequire	The total number of S1 Application Protocol - receive data - handover required messages. Type: Counter	Int32
s1ap-recdata-hofail	The total number of S1 Application Protocol - receive data - handover failures. Type: Counter	Int32
s1ap-recdata-honotify	The total number of S1 Application Protocol - receive data - handover notify messages. Type: Counter	Int32
s1ap-recdata-pathswreq	The total number of S1 Application Protocol - receive data - path switch requests. Type: Counter	Int32
s1ap-recdata-enbstatustrans	The total number of S1 Application Protocol - receive data - ENodeB status transfers. Type: Counter	Int32
s1ap-recdata-uecap	The total number of S1 Application Protocol - receive data - UE capability information indications. Type: Counter	Int32

Variables	Description	Data Type
s1ap-recdata-ulinkunnel	The total number of S1 Application Protocol - receive data - uplink S1 CDMA 2000 tunneling. Type: Counter	Int32
s1ap-recdata-tracefailind	The total number of S1 Application Protocol - receive data - trace failure indications. Type: Counter	Int32
s1ap-recdata-locrep	The total number of S1 Application Protocol - receive data - location reports. Type: Counter	Int32
s1ap-recdata-locrepfailind	The total number of S1 Application Protocol - receive data - location report failure indications. Type: Counter	Int32
s1ap-recdata-decfail	The total number of S1 Application Protocol - receive data - S1 AP decode failures. Type: Counter	Int32
s1ap-recdata-unexpevt	The total number of S1 Application Protocol - receive data - S1 AP unexpected events. Type: Counter	Int32
 Important: The following EMM event TAU, outbound RAU, outbound S1, inbound TAU, and inbound S1 statistics are only available in 12.0 and earlier releases.		
emmevent-tauattach-success	The total number of EPS Mobility Management events - tracking area update attach successes. Type: Counter	Int32
emmevent-tauattach-failure	The total number of EPS Mobility Management events - tracking area update attach failures. Type: Counter	Int32
emmevent-outrauho4g3g-success	The total number of EPS Mobility Management events - outbound RAU E-UTRAN to UTRAN handovers - successes. Type: Counter	Int32
emmevent-outrauho4g3g-failure	The total number of EPS Mobility Management events - outbound RAU E-UTRAN to UTRAN handovers - failures. Type: Counter	Int32
emmevent-outs1ho4g3g-success	The total number of EPS Mobility Management events - outbound S1 E-UTRAN to UTRAN handovers - successes. Type: Counter	Int32
emmevent-outs1ho4g3g-failure	The total number of EPS Mobility Management events - outbound S1 E-UTRAN to UTRAN handovers - failures. Type: Counter	Int32
emmevent-intauho3g4g-success	The total number of EPS Mobility Management events - inbound TAU UTRAN to E-UTRAN handovers - successes. Type: Counter	Int32

Variables	Description	Data Type
emmevent-intauho3g4g-failure	The total number of EPS Mobility Management events - inbound TAU UTRAN to E-UTRAN handovers - failures. Type: Counter	Int32
emmevent-ins1ho3g4g-success	The total number of EPS Mobility Management events - inbound S1 UTRAN to E-UTRAN handovers - successes. Type: Counter	Int32
emmevent-ins1ho3g4g-failure	The total number of EPS Mobility Management events - inbound S1 UTRAN to E-UTRAN handovers - failures. Type: Counter	Int32
 Important: The previous EMM event TAU, outbound RAU, outbound S1, inbound TAU, and inbound S1 statistics are only available in 12.0 and earlier releases.		
epsattach-imsi-attempted	The total number of EPS associations by attach using IMSI - attempts. Type: Counter	Int32
epsattach-imsi-success	The total number of EPS associations by attach using IMSI - successes. Type: Counter	Int32
epsattach-imsi-failures	The total number of EPS associations by attach using IMSI - failures. Type: Counter	Int32
epsattach-guti-local-attempted	The total number of EPS associations by attach using local GUTI - attempts. Type: Counter	Int32
epsattach-guti-local-success	The total number of EPS associations by attach using local GUTI - successes. Type: Counter	Int32
epsattach-guti-local-failures	The total number of EPS associations by attach using local GUTI - failures. Type: Counter	Int32
epsattach-guti-foreign-attempted	The total number of EPS associations by attach using foreign GUTI - attempts. Type: Counter	Int32
epsattach-guti-foreign-success	The total number of EPS associations by attach using foreign GUTI - successes. Type: Counter	Int32
epsattach-guti-foreign-failures	The total number of EPS associations by attach using foreign GUTI - failures. Type: Counter	Int32
epsattach-ptmsi-attempted	The total number of EPS associations by attach using P-TMSI - attempts. Type: Counter	Int32
epsattach-ptmsi-success	The total number of EPS associations by attach using P-TMSI - successes. Type: Counter	Int32
epsattach-ptmsi-failures	The total number of EPS associations by attach using P-TMSI - failures. Type: Counter	Int32
epstauattach-guti-foreign-attempted	The total number of EPS associations by TAU attach using foreign GUTI - attempts. Type: Counter	Int32

Variables	Description	Data Type
epstauattach-guti-foreign-success	The total number of EPS associations by TAU attach using foreign GUTI - successes. Type: Counter	Int32
epstauattach-guti-foreign-failures	The total number of EPS associations by TAU attach using foreign GUTI - failures. Type: Counter	Int32
epstauattach-ptmsi-attempted	The total number of EPS associations by TAU attach using P-TMSI - attempts. Type: Counter	Int32
epstauattach-ptmsi-success	The total number of EPS associations by TAU attach using P-TMSI - successes. Type: Counter	Int32
epstauattach-ptmsi-failures	The total number of EPS associations by TAU attach using P-TMSI - failures. Type: Counter	Int32
combinedattach-imsi-attempted	The total number of EPS associations by combined attach using IMSI - attempts. Type: Counter	Int32
combinedattach-imsi-success	The total number of EPS associations by combined attach using IMSI - successes. Type: Counter	Int32
combinedattach-imsi-success-eps	The total number of EPS associations by combined attach using IMSI - EPS successes only. Type: Counter	Int32
combinedattach-imsi-failure	The total number of EPS associations by combined attach using IMSI - failures. Type: Counter	Int32
combinedattach-guti-local-attached	The total number of EPS associations by combined attach using local GUTI - attempts. Type: Counter	Int32
combinedattach-guti-local-success	The total number of EPS associations by combined attach using local GUTI - successes. Type: Counter	Int32
combinedattach-guti-local-success-eps	The total number of EPS associations by combined attach using local GUTI - EPS successes only. Type: Counter	Int32
combinedattach-guti-local-failure	The total number of EPS associations by combined attach using local GUTI - failures. Type: Counter	Int32
combinedattach-guti-foreign-attempted	The total number of EPS associations by combined attach using foreign GUTI - attempts. Type: Counter	Int32
combinedattach-guti-foreign-success	The total number of EPS associations by combined attach using foreign GUTI - successes. Type: Counter	Int32
combinedattach-guti-foreign-success-eps	The total number of EPS associations by combined attach using foreign GUTI - EPS successes only. Type: Counter	Int32

Variables	Description	Data Type
combinedattach-guti-foreign-failure	The total number of EPS associations by combined attach using foreign GUTI - failures. Type: Counter	Int32
combinedattach-ptmsi-attempted	The total number of EPS associations by combined attach using P-TMSI - attempts. Type: Counter	Int32
combinedattach-ptmsi-success	The total number of EPS associations by combined attach using P-TMSI - successes. Type: Counter	Int32
combinedattach-ptmsi-success-eps	The total number of EPS associations by combined attach using P-TMSI - EPS successes only. Type: Counter	Int32
combinedattach-ptmsi-failure	The total number of EPS associations by combined attach using P-TMSI - failures. Type: Counter	Int32
combined-tauattach-guti-foreign-attempted	The total number of EPS associations by combined TAU attach using foreign GUTI - attempts. Type: Counter	Int32
combined-tauattach-guti-foreign-success	The total number of EPS associations by combined TAU attach using foreign GUTI - successes. Type: Counter	Int32
combined-tauattach-guti-foreign-success-eps	The total number of EPS associations by combined TAU attach using foreign GUTI - EPS successes only. Type: Counter	Int32
combined-tauattach-guti-foreign-failure	The total number of EPS associations by combined TAU attach using foreign GUTI - failures. Type: Counter	Int32
combined-tauattach-ptmsi-attempted	The total number of EPS associations by combined TAU attach using P-TMSI - attempts. Type: Counter	Int32
combined-tauattach-ptmsi-success	The total number of EPS associations by combined TAU attach using P-TMSI - successes. Type: Counter	Int32
combined-tauattach-ptmsi-success-eps	The total number of EPS associations by combined TAU attach using P-TMSI - EPS successes only. Type: Counter	Int32
combined-tauattach-ptmsi-failure	The total number of EPS associations by combined TAU attach using P-TMSI - failures. Type: Counter	Int32
tau-periodic-attempted	The total number of EMM periodic TAU request attempts where the update type was set to periodic. Type: Counter	Int32
tau-periodic-success	The total number of EMM periodic TAU request successes where the update type was set to periodic. Type: Counter	Int32

Variables	Description	Data Type
tau-periodic-failures	The total number of EMM periodic TAU request failures where the update type was set to periodic. Type: Counter	Int32
tau-normal-attempted	The total number of EMM normal TAU request attempts where the update type was set to periodic (without S-GW relocation). Type: Counter	Int32
tau-normal-success	The total number of EMM normal TAU request successes where the update type was set to periodic (without S-GW relocation). Type: Counter	Int32
tau-normal-failures	The total number of EMM normal TAU request failures where the update type was set to periodic (without S-GW relocation). Type: Counter	Int32
tau-active-attempted	The total number of EMM TAU with bearer activation attempts (activate bearer flag set to “true” in the TAU procedure). Type: Counter	Int32
tau-active-success	The total number of EMM TAU with bearer activation successes (activate bearer flag set to “true” in the TAU procedure). Type: Counter	Int32
tau-active-failures	The total number of EMM TAU with bearer activation failures (activate bearer flag set to “true” in the TAU procedure). Type: Counter	Int32
tau-sgw-change-attempted	The total number of EMM TAU with S-GW relocation attempts (new TAI triggered S-GW relocation for the UE). Type: Counter	Int32
tau-sgw-change-success	The total number of EMM TAU with S-GW relocation successes (new TAI triggered S-GW relocation for the UE). Type: Counter	Int32
tau-sgw-change-failures	The total number of EMM TAU with S-GW relocation failures (new TAI triggered S-GW relocation for the UE). Type: Counter	Int32
paging-init-events-attempted	The total number of EMM paging initiation events - attempts. Type: Counter	Int32
paging-init-events-success	The total number of EMM paging initiation events - successes. Type: Counter	Int32
paging-init-events-failures	The total number of EMM paging initiation events - failures Type: Counter	Int32
paging-last-enb-success	The total number of EMM paging initiation events - success at last ENodeB. Type: Counter	Int32
paging-last-tai-success	The total number of EMM paging initiation events - success at last TAI. Type: Counter	Int32
paging-tai-list-success	The total number of EMM paging initiation events - success at TAI list. Type: Counter	Int32

Variables	Description	Data Type
emm-msgtx-attach-accept	The total number of EMM control messages sent - accepted attaches. Type: Counter	Int32
emm-msgtx-attach-accept-retx	The total number of EMM control messages sent - retransmitted attaches. Type: Counter	Int32
emm-msgtx-attach-reject	The total number of EMM control messages sent - rejected attaches. Type: Counter	Int32
emm-msgtx-imsi-unknown-hss	The total number of EMM control messages sent - IMSI unknown in HSS. Type: Counter	Int32
emm-msgtx-illegal-ue	The total number of EMM control messages sent - illegal UE. Type: Counter	Int32
emm-msgtx-illegal-me	The total number of EMM control messages sent - illegal ME. Type: Counter	Int32
emm-msgtx-eps-not-allowed	The total number of EMM control messages sent - EPS not allowed. Type: Counter	Int32
emm-msgtx-network-failure	The total number of EMM control messages sent - network failures. Type: Counter	Int32
emm-msgtx-esm-failure	The total number of EMM control messages sent - ESM failures. Type: Counter	Int32
emm-msgtx-decode-failure	The total number of EMM control messages sent - decode failures. Type: Counter	Int32
emm-msgtx-auth-reject	The total number of EMM control messages sent - authentication rejects. Type: Counter	Int32
emm-msgtx-auth-req	The total number of EMM control messages sent - authentication requests. Type: Counter	Int32
emm-msgtx-auth-req-retx	The total number of EMM control messages sent - retransmitted authentication requests. Type: Counter	Int32
emm-msgtx-detach-request	The total number of EMM control messages sent - detach requests. Type: Counter	Int32
emm-msgtx-detach-req-retx	The total number of EMM control messages sent - retransmitted detach requests. Type: Counter	Int32
emm-msgtx-reattach-req	The total number of EMM control messages sent - reattach required. Type: Counter	Int32
emm-msgtx-reattach-not-req	The total number of EMM control messages sent - reattach not required. Type: Counter	Int32

Variables	Description	Data Type
emm-msgtx-imsi-detach	The total number of EMM control messages sent - IMSI detach. Type: Counter  Important: This statistic is only available in 12.0 and earlier releases.	Int32
emm-msgtx-detach-accept	The total number of EMM control messages sent - detach accepts. Type: Counter	Int32
emm-msgtx-downlink-transport	The total number of EMM control messages sent - downlink NAS transports. Type: Counter	Int32
emm-msgtx-emm-info	The total number of EMM control messages sent - EMM information. Type: Counter	Int32
emm-msgtx-emm-status	The total number of EMM control messages sent - EMM status. Type: Counter	Int32
emm-msgtx-guti-reloc	The total number of EMM control messages sent - GUTI relocations. Type: Counter	Int32
emm-msgtx-guti-reloc-retx	The total number of EMM control messages sent - retransmitted GUTI relocations. Type: Counter	Int32
emm-msgtx-identity-req	The total number of EMM control messages sent - identity requests. Type: Counter	Int32
emm-msgtx-identity-req-retx	The total number of EMM control messages sent - retransmitted identity requests. Type: Counter	Int32
emm-msgtx-sm-cmd	The total number of EMM control messages sent - security mode commands. Type: Counter	Int32
emm-msgtx-sm-cmd-retx	The total number of EMM control messages sent - retransmitted security mode commands. Type: Counter	Int32
emm-msgtx-service-reject	The total number of EMM control messages sent - service rejects. Type: Counter	Int32
emm-msgtx-ue-identity-unk	The total number of EMM control messages sent - UE identity unknown. Type: Counter	Int32
emm-msgtx-impl-detached	The total number of EMM control messages sent - implicitly detached. Type: Counter	Int32
emm-msgtx-tau-accept	The total number of EMM control messages sent - TAU accepts. Type: Counter	Int32
emm-msgtx-tau-accept-retx	The total number of EMM control messages sent - retransmitted TAU accepts. Type: Counter	Int32
emm-msgtx-tau-reject	The total number of EMM control messages sent - TAU rejects. Type: Counter	Int32

Variables	Description	Data Type
emm-msgtx-tau-imsi-unknown-hss	The total number of EMM control messages sent - TAU IMSI unknown in HSS. Type: Counter	Int32
emm-msgtx-tau-illegal-ue	The total number of EMM control messages sent - TAU illegal UE. Type: Counter	Int32
emm-msgtx-tau-illegal-me	The total number of EMM control messages - sent - TAU illegal ME. Type: Counter	Int32
emm-msgtx-tau-eps-not-allowed	The total number of EMM control messages sent - TAU EPA not allowed. Type: Counter	Int32
emm-msgtx-tau-network-fail	The total number of EMM control messages sent - TAU network failures. Type: Counter	Int32
emm-msgtx-tau-esm-failure	The total number of EMM control messages sent - TAU ESM failures.  Important: This statistic is only available in 12.0 and earlier releases.	Int32
emm-msgtx-tau-decode-failure	The total number of EMM control messages sent - TAU decode failures. Type: Counter	Int32
emm-msgtx-tau-no-bearer-active	The total number of EMM control messages sent - TAU no bearer active. Type: Counter	Int32
emm-msgtx-tau-ue-identity-unk	The total number of EMM control messages sent - TAU UE identity unknown. Type: Counter	Int32
emm-msgtx-tau-implicit-detached	The total number of EMM control messages sent - TAU implicitly detached. Type: Counter	Int32
emm-msgrx-plain-nas	The total number of EMM control messages received - clear-text messages. Type: Counter	Int32
emm-msgrx-integrity	The total number of EMM control messages received - integrity-check enabled. Type: Counter	Int32
emm-msgrx-ciphered	The total number of EMM control messages received - ciphered messages. Type: Counter	Int32
emm-msgrx-accepted	The total number of EMM control messages received - accepted. Type: Counter	Int32
emm-msgrx-discarded	The total number of EMM control messages received - discarded. Type: Counter	Int32
emm-msgrx-denied	The total number of EMM control messages received - denied. Type: Counter	Int32
emm-msgrx-decode-failure	The total number of EMM control messages received - decode failures. Type: Counter	Int32
emm-msgrx-attach-complete	The total number of EMM control messages received - attach complete. Type: Counter	Int32

Variables	Description	Data Type
emm-msgrx-attach-req	The total number of EMM control messages received - attach requests. Type: Counter	Int32
emm-msgrx-attach-retx	The total number of EMM control messages received - retransmitted attach requests. Type: Counter  Important: This statistic is only available in 12.2 and earlier releases.	Int32
emm-msgrx-auth-failure	The total number of EMM control messages received - authentication failures. Type: Counter	Int32
emm-msgrx-auth-resp	The total number of EMM control messages received - authentication responses. Type: Counter	Int32
emm-msgrx-detach-req	The total number of EMM control messages received - detach requests. Type: Counter	Int32
emm-msgrx-detach-req-switchoff	The total number of EMM control messages received - detach requests - switch off. Type: Counter	Int32
emm-msgrx-detach-req-not-switchoff	The total number of EMM control messages received - detach requests - not switch off. Type: Counter	Int32
emm-msgrx-imsi-detach	The total number of EMM control messages received - IMSI detach. Type: Counter	Int32
emm-msgrx-emm-status	The total number of EMM control messages received - EMM status. Type: Counter	Int32
emm-msgrx-guti-reloc-complete	The total number of EMM control messages received - GUTI relocation complete. Type: Counter	Int32
emm-msgrx-sm-complete	The total number of EMM control messages received - security mode complete. Type: Counter	Int32
emm-msgrx-sm-reject	The total number of EMM control messages received - security mode reject. Type: Counter	Int32
emm-msgrx-service-req	The total number of EMM control messages received - service requests. Type: Counter	Int32
emm-msgrx-tau-req	The total number of EMM control messages received - TAU requests. Type: Counter	Int32
emm-msgrx-tau-retx	The total number of EMM control messages received - retransmitted TAU. Type: Counter	Int32
emm-msgrx-tau-complete	The total number of EMM control messages received - TAU complete. Type: Counter	Int32
pdn-disconnect-ue-attempted	The total number of ESM UE-initiated PDN disconnections - attempted. Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
pdn-disconnect-ue-success	The total number of ESM UE-initiated PDN disconnections - successes. Type: Counter	Int32
pdn-disconnect-ue-failures	The total number of ESM UE-initiated PDN disconnections - failures. Type: Counter	Int32
pdn-disconnect-mme-attempted	The total number of ESM MME-initiated PDN disconnections - attempted. Type: Counter	Int32
pdn-disconnect-mme-success	The total number of ESM MME-initiated PDN disconnections - successes. Type: Counter	Int32
pdn-disconnect-mme-failures	The total number of ESM MME-initiated PDN disconnections - failures. Type: Counter	Int32
pdn-disconnect-pgw-attempted	The total number of ESM P-GW/S-GW-initiated PDN disconnections - attempted. Type: Counter	Int32
pdn-disconnect-pgw-success	The total number of ESM P-GW/S-GW-initiated PDN disconnections - successes. Type: Counter	Int32
pdn-disconnect-pgw-failures	The total number of ESM P-GW/S-GW-initiated PDN disconnections - failures. Type: Counter	Int32
pdn-disconnect-hss-attempted	The total number of ESM HSS-initiated PDN disconnections - attempted. Type: Counter	Int32
pdn-disconnect-hss-success	The total number of ESM HSS-initiated PDN disconnections - successes. Type: Counter	Int32
pdn-disconnect-hss-failures	The total number of ESM HSS-initiated PDN disconnections - failures. Type: Counter	Int32
dedi-brr-activation-ue-attempted	The total number of ESM UE-initiated dedicated bearer activations - attempted. Type: Counter	Int32
dedi-brr-activation-ue-success	The total number of ESM UE-initiated dedicated bearer activations - successes. Type: Counter	Int32
dedi-brr-activation-ue-failures	The total number of ESM UE-initiated dedicated bearer activations - failures. Type: Counter	Int32
dedi-brr-activation-nw-attempted	The total number of ESM Network-initiated dedicated bearer activations - attempted. Type: Counter	Int32
dedi-brr-activation-nw-success	The total number of ESM Network-initiated dedicated bearer activations - successes. Type: Counter	Int32
dedi-brr-activation-nw-failures	The total number of ESM Network-initiated dedicated bearer activations - failures. Type: Counter	Int32
brr-deactivation-mme-attempted	The total number of ESM MME-initiated bearer deactivations - attempted. Type: Counter	Int32
brr-deactivation-mme-success	The total number of ESM MME-initiated bearer deactivations - successes. Type: Counter	Int32

Variables	Description	Data Type
brr-deactivation-mme-failures	The total number of ESM MME-initiated bearer deactivations - failures. Type: Counter	Int32
brr-deactivation-pgw-attempted	The total number of ESM P-GW/S-GW-initiated bearer deactivations - attempted. Type: Counter	Int32
brr-deactivation-pgw-success	The total number of ESM P-GW/S-GW-initiated bearer deactivations - successes. Type: Counter	Int32
brr-deactivation-pgw-failures	The total number of ESM P-GW/S-GW-initiated bearer deactivations - failures. Type: Counter	Int32
brr-deactivation-ue-attempted	The total number of ESM UE-initiated bearer deactivations - attempted. Type: Counter	Int32
brr-deactivation-ue-success	The total number of ESM UE-initiated bearer deactivations - successes. Type: Counter	Int32
brr-deactivation-ue-failures	The total number of ESM UE-initiated bearer deactivations - failures. Type: Counter	Int32
brr-deactivation-nw-attempted	The total number of ESM Network-initiated bearer deactivations - attempted. Type: Counter	Int32
brr-deactivation-nw-success	The total number of ESM Network-initiated bearer deactivations - successes. Type: Counter	Int32
brr-deactivation-nw-failures	The total number of ESM Network-initiated bearer deactivations - failures. Type: Counter	Int32
brr-modification-hss-attempted	The total number of ESM HSS-initiated bearer modifications - attempted. Type: Counter	Int32
brr-modification-hss-success	The total number of ESM HSS-initiated bearer modifications - successes. Type: Counter	Int32
brr-modification-hss-failures	The total number of ESM HSS-initiated bearer modifications - failures. Type: Counter	Int32
brr-modification-pgw-attempted	The total number of ESM P-GW/S-GW-initiated bearer modifications - attempted. Type: Counter	Int32
brr-modification-pgw-success	The total number of ESM P-GW/S-GW-initiated bearer modifications - successes. Type: Counter	Int32
brr-modification-pgw-failures	The total number of ESM P-GW/S-GW-initiated bearer modifications - failures. Type: Counter	Int32
brr-modification-ue-attempted	The total number of ESM UE-initiated bearer modifications - attempted. Type: Counter	Int32
brr-modification-ue-success	The total number of ESM UE-initiated bearer modifications - successes. Type: Counter	Int32
brr-modification-ue-failures	The total number of ESM UE-initiated bearer modifications - failures. Type: Counter	Int32

Variables	Description	Data Type
brr-modification-nw-attempted	The total number of ESM Network-initiated bearer modifications - attempted. Type: Counter	Int32
brr-modification-nw-success	The total number of ESM Network-initiated bearer modifications - successes. Type: Counter	Int32
brr-modification-nw-failures	The total number of ESM Network-initiated bearer modifications - failures. Type: Counter	Int32
esm-msgtx-act-ded-brr	The total number of ESM control messages sent - activate dedicated bearer. Type: Counter	Int32
esm-msgtx-act-ded-brr-retx	The total number of ESM control messages sent - retransmitted activate dedicated bearer. Type: Counter	Int32
esm-msgtx-act-dflt-brr	The total number of ESM control messages sent - activate default bearer. Type: Counter	Int32
esm-msgtx-act-dflt_bee-retx	The total number of ESM control messages sent - retransmitted activate default bearer. Type: Counter	Int32
esm-msgtx-brralloc-rej	The total number of ESM control messages sent - bearer allocation reject. Type: Counter	Int32
esm-msgtx-brralloc-rej-ptl-inuse	The total number of ESM control messages sent - bearer allocation reject - PTI already in use. Type: Counter	Int32
esm-msgtx-brralloc-rej-semantic-errtft	The total number of ESM control messages sent - bearer allocation reject - semantic error TFT. Type: Counter	Int32
esm-msgtx-brralloc-rej-syntactic-errtft	The total number of ESM control messages sent - bearer allocation reject - syntactic error TFT. Type: Counter	Int32
esm-msgtx-brralloc-rej-invalid-brrid	The total number of ESM control messages sent - bearer allocation reject - invalid bearer ID. Type: Counter	Int32
esm-msgtx-brralloc-rej-collision-nwop	The total number of ESM control messages sent - bearer allocation reject - collision with network op. Type: Counter	Int32
esm-msgtx-brralloc-rej-pgw-rej	The total number of ESM control messages sent - bearer allocation reject - rejected by P-GW/S-GW. Type: Counter  Important: This statistic is only available in 12.0 and earlier releases.	Int32

Variables	Description	Data Type
esm-msgtx-bralloc-rej-invalid-pti	The total number of ESM control messages sent - bearer allocation reject - invalid PTI. Type: Counter	Int32
esm-msgtx-brrmod-rej	The total number of ESM control messages sent - bearer modification reject. Type: Counter	Int32
esm-msgtx-brrmod-rej-pti-inuse	The total number of ESM control messages sent - bearer modification reject - PTI already in use. Type: Counter	Int32
esm-msgtx-brrmod-rej-semantic-errtft	The total number of ESM control messages sent - bearer modification reject - semantic error TFT. Type: Counter	Int32
esm-msgtx-brrmod-rej-syntactic-errtft	The total number of ESM control messages sent - bearer modification reject - syntactic error TFT. Type: Counter	Int32
esm-msgtx-brrmod-rej-invalid-brrid	The total number of ESM control messages sent - bearer modification reject - invalid bearer ID. Type: Counter	Int32
esm-msgtx-brrmod-rej-collision-nwop	The total number of ESM control messages sent - bearer modification reject - collision with network op. Type: Counter	Int32
esm-msgtx-brrmod-rej-pgw-rej	The total number of ESM control messages sent - bearer modification reject - rejected by P-GW/S-GW. Type: Counter	Int32
esm-msgtx-brrmod-rej-invalid-pti	The total number of ESM control messages sent - bearer modification reject - invalid PTI. Type: Counter	Int32
esm-msgtx-deactbrr	The total number of ESM control messages sent - deactivate bearer. Type: Counter	Int32
esm-msgtx-deactbrr-retx	The total number of ESM control messages sent - retransmitted deactivate bearer. Type: Counter	Int32
esm-msgtx-deactbrr-esm-info-req	The total number of ESM control messages sent - deactivate bearer - ESM information request. Type: Counter	Int32
esm-msgtx-deactbrr-esm-info-req-retx	The total number of ESM control messages sent - deactivate bearer - retransmitted ESM information request. Type: Counter	Int32
esm-msgtx-deactbrr-modbrr	The total number of ESM control messages sent - deactivate bearer - modify bearer. Type: Counter	Int32
esm-msgtx-deactbrr-moderr-retx	The total number of ESM control messages sent - deactivate bearer - retransmitted modify bearer. Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
esm-msgtx-pdncon-rej	The total number of ESM control messages sent - PDN connectivity reject. Type: Counter	Int32
esm-msgtx-pdncon-rej-pti-inuse	The total number of ESM control messages sent - PDN connectivity reject - PTI already in use. Type: Counter	Int32
esm-msgtx-pdncon-rej-apn-unk	The total number of ESM control messages sent - PDN connectivity reject - unknown or missing APN. Type: Counter	Int32
esm-msgtx-pdncon-rej-pdntype-unk	The total number of ESM control messages sent - PDN connectivity reject - unknown PDN type. Type: Counter	Int32
esm-msgtx-pdncon-rej-inv-brrid	The total number of ESM control messages sent - PDN connectivity reject - invalid bearer ID. Type: Counter	Int32
esm-msgtx-pdncon-rej-inv-pti	The total number of ESM control messages sent - PDN connectivity reject - invalid PTI. Type: Counter	Int32
esm-msgtx-pdncon-rej-pgw-rej	The total number of ESM control messages sent - PDN connectivity reject - rejected by P-GW/S-GW. Type: Counter	Int32
esm-msgtx-pdndiscon-rej	The total number of ESM control messages sent - PDN disconnect reject. Type: Counter	Int32
esm-msgtx-pdndiscon-rej-pti-inuse	The total number of ESM control messages sent - PDN disconnect reject - PTI already in use. Type: Counter	Int32
esm-msgtx-pdndiscon-rej-lastpdn	The total number of ESM control messages sent - PDN disconnect reject - last PDN disconnection. Type: Counter	Int32
esm-msgtx-pdndiscon-rej-inv-pti	The total number of ESM control messages sent - PDN disconnect reject - invalid PTI. Type: Counter	Int32
esm-msgtx-pdndiscon-rej-inv-brrid	The total number of ESM control messages sent - PDN disconnect reject - invalid bearer ID. Type: Counter	Int32
esm-msgtx-pdndiscon-rej-pgw-rej	The total number of ESM control messages sent - PDN disconnect reject - rejected by P-GW/S-GW. Type: Counter	Int32
esm-msgrx-plain-nas	The total number of ESM control messages received - clear text messages. Type: Counter	Int32
esm-msgrx-integrity	The total number of ESM control messages received - integrity-check enabled. Type: Counter	Int32

Variables	Description	Data Type
esm-msgrx-ciphered	The total number of ESM control messages received - ciphered messages. Type: Counter	Int32
esm-msgrx-accepted	The total number of ESM control messages received - accepted. Type: Counter	Int32
esm-msgrx-discarded	The total number of ESM control messages received - discarded. Type: Counter  Important: This statistic is only available in 12.0 and earlier releases.	Int32
esm-msgrx-denied	The total number of ESM control messages received - denied. Type: Counter	Int32
esm-msgrx-decode-failures	The total number of ESM control messages received - decode failures. Type: Counter  Important: This statistic is only available in 12.0 and earlier releases.	Int32
esm-msgrx-ded-brr-accept	The total number of ESM control messages received - activate dedicated bearer accept. Type: Counter	Int32
esm-msgrx-ded-brr-reject	The total number of ESM control messages received - activate dedicated bearer reject. Type: Counter	Int32
esm-msgrx-dflt-brr-accept	The total number of ESM control messages received - activate default bearer accept. Type: Counter	Int32
esm-msgrx-dflt-brr-reject	The total number of ESM control messages received - activate default bearer reject. Type: Counter	Int32
esm-msgrx-brr-rsrc-alloc-req	The total number of ESM control messages received - bearer resource allocation request. Type: Counter	Int32
esm-msgrx-brr-rsrc-modify-req	The total number of ESM control messages received - bearer resource modification request. Type: Counter	Int32
esm-msgrx-esm-info-resp	The total number of ESM control messages received - ESM information response. Type: Counter	Int32
esm-msgrx-em-status	The total number of ESM control messages received - ESM status. Type: Counter	Int32
esm-msgrx-mod-brr-accept	The total number of ESM control messages received - modify bearer context accept. Type: Counter	Int32

Variables	Description	Data Type
esm-msgrx-mod-brr-reject	The total number of ESM control messages received - modify bearer context reject. Type: Counter	Int32
esm-msgrx-pdn-con-req	The total number of ESM control messages received - PDN connectivity request. Type: Counter	Int32
esm-msgrx-pdn-discon-req	The total number of ESM control messages received - PDN disconnect request. Type: Counter	Int32
out-tau-ho-4gto4g-s10-attempted	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - outbound relocation using TAU procedure - attempted. Type: Counter	Int32
out-tau-ho-4gto4g-s10-success	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - outbound relocation using TAU procedure - successes. Type: Counter	Int32
out-tau-ho-4gto4g-s10-failures	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - outbound relocation using TAU procedure - failures. Type: Counter	Int32
out-s1-ho-4gto4g-s10-attempted	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - outbound relocation using S1 handover procedure - attempted. Type: Counter	Int32
out-s1-ho-4gto4g-s10-success	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - outbound relocation using S1 handover procedure - successes. Type: Counter	Int32
out-s1-ho-4gto4g-s10-failures	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - outbound relocation using S1 handover procedure - failures. Type: Counter	Int32
in-tau-ho-4gto4g-s10-attempted	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - inbound relocation using TAU procedure - attempted. Type: Counter	Int32
in-tau-ho-4gto4g-s10-success	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - inbound relocation using TAU procedure - successes. Type: Counter	Int32
in-tau-ho-4gto4g-s10-failures	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - inbound relocation using TAU procedure - failures. Type: Counter	Int32
in-s1-ho-4gto4g-s10-attempted	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - inbound relocation using S1 handover procedure - attempted. Type: Counter	Int32
in-s1-ho-4gto4g-s10-success	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - inbound relocation using S1 handover procedure - successes. Type: Counter	Int32
in-s1-ho-4gto4g-s10-failures	The total number of handovers - E-UTRAN to E-UTRAN using S10 interface - inbound relocation using S1 handover procedure - failures. Type: Counter	Int32

Variables	Description	Data Type
out-s1-ho-4gto3g-gngp-attempted	The total number of handovers - E-UTRAN to UTRAN using Gn/Gp interface - outbound relocation using S1 handover procedure - attempted. Type: Counter	Int32
out-s1-ho-4gto3g-gngp-success	The total number of handovers - E-UTRAN to UTRAN using Gn/Gp interface - outbound relocation using S1 handover procedure - successes. Type: Counter	Int32
out-s1-ho-4gto3g-gngp-failures	The total number of handovers - E-UTRAN to UTRAN using Gn/Gp interface - outbound relocation using S1 handover procedure - failures. Type: Counter	Int32
in-s1-ho-3gto4g-gngp-attempted	The total number of handovers - UTRAN to E-UTRAN using Gn/Gp interface - inbound relocation using S1 handover procedure - attempted. Type: Counter	Int32
in-s1-ho-3gto4g-gngp-success	The total number of handovers - UTRAN to E-UTRAN using Gn/Gp interface - inbound relocation using S1 handover procedure - successes. Type: Counter	Int32
in-s1-ho-3gto4g-gngp-failures	The total number of handovers - UTRAN to E-UTRAN using Gn/Gp interface - inbound relocation using S1 handover procedure - failures. Type: Counter	Int32
out-s1-ho-4gto2g-gngp-attempted	The total number of handovers - E-UTRAN to GERAN using Gn/Gp interface - outbound relocation using S1 handover procedure - attempted. Type: Counter	Int32
out-s1-ho-4gto2g-gngp-success	The total number of handovers - E-UTRAN to GERAN using Gn/Gp interface - outbound relocation using S1 handover procedure - successes. Type: Counter	Int32
out-s1-ho-4gto2g-gngp-failures	The total number of handovers - E-UTRAN to GERAN using Gn/Gp interface - outbound relocation using S1 handover procedure - failures. Type: Counter	Int32
in-s1-ho-2gto4g-gngp-attempted	The total number of handovers - GERAN to E-UTRAN using Gn/Gp interface - inbound relocation using S1 handover procedure - attempted. Type: Counter	Int32
in-s1-ho-2gto4g-gngp-success	The total number of handovers - GERAN to E-UTRAN using Gn/Gp interface - inbound relocation using S1 handover procedure - successes. Type: Counter	Int32
in-s1-ho-2gto4g-gngp-failures	The total number of handovers - GERAN to E-UTRAN using Gn/Gp interface - inbound relocation using S1 handover procedure - failures. Type: Counter	Int32
 Important: The following PDN and bearer statistics are only available in 12.0 and earlier releases.		
tot-pdn-current	The total number of all current PDNs. Type: Counter	Int32

Variables	Description	Data Type
tot-pdn-max	The total number of maximum PDNs. Type: Counter	Int32
connected-pdn-current	The total number of connected PDNs - current. Type: Counter	Int32
connected-pdn-max	The total number of connected PDNs - maximum. Type: Counter	Int32
idle-pdn-current	The total number of idle PDNs - current. Type: Counter	Int32
idle-pdn-max	The total number of idle PDNs - maximum. Type: Counter	Int32
tot-brr-current	The total number of all bearers - current. Type: Counter	Int32
tot-brr-max	The total number of all bearers - maximum. Type: Counter	Int32
connected-brr-current	The total number of connected bearers - current. Type: Counter	Int32
connected-brr-max	The total number of connected bearers - maximum. Type: Counter	Int32
idle-brr-current	The total number of idle bearers - current. Type: Counter	Int32
idle-brr-max	The total number of idle bearers - maximum. Type: Counter	Int32



Important: The previous PDN and bearer statistics are only available in 12.0 and earlier releases.



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 45

MVS Schema Statistics

The MVS (Mobile Videoscape) schema provides operational statistics that can be used for monitoring and troubleshooting the Mobile Video Gateway.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 45. Bulk Statistic Variables in the MVS Schema

Variables	Description	Data Type

Variables	Description	Data Type
curflows-paced	Description: The number of current video flows paced. For video pacing. This variable is proprietary. Trigger: The charging action event increments this statistic. Availability: Video pacing, which is part of ECS (Enhanced Charging Services), generates this statistic. Type: Gauge	Int32
ttl-flows-paced	Description: The total number of video flows paced. For video pacing. This variable is proprietary. Trigger: The charging action event increments this statistic. Availability: Video pacing, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
ttl-flows-optimized	Description: The total number of TCP flows optimized. For TPO. This variable is proprietary. Trigger: This variable gets triggered when TPO is enabled on the flow. Availability: TPO, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
avrg-goodput	Description: The average goodput of optimized TCP flows in kbps. For TPO. This variable is proprietary. Trigger: This variable gets triggered when TPO is enabled on the flow. Availability: TPO, which is part of ECS (Enhanced Charging Services), generates this statistic. Type: Gauge	Int32
avrg-conn-setup-time-ms	Description: The average connection setup time of Optimized TCP flows in milliseconds. For TPO. This variable is proprietary. Trigger: This variable gets triggered when TPO is enabled on the flow. Availability: TPO, which is part of ECS (Enhanced Charging Services), generates this statistic. Type: Gauge	Int32
avrg-goodput-cong-avoid	Description: The average goodput of optimized TCP flows during congestion avoidance in kbps. For TPO. This variable is proprietary. Trigger: This variable gets triggered when TPO is enabled on the flow. Availability: TPO, which is part of ECS (Enhanced Charging Services), generates this statistic. Type: Gauge	Int32

Variables	Description	Data Type
tcplm-video-avrg-rtt-ms	Description: The average video round trip time in milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-avrg-rtt-ms	Description: The average non-video round trip time in milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-avrg-rate	Description: The average video bit rate in kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-avrg-rate	Description: The average non-video bit rate in kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-lt-50ms	Description: The number of average video round trip times less than 50 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-50-69ms	Description: The number of average video round trip times between 50 and 69 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rtt-70-89ms	Description: The number of average video round trip times between 70 and 89 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-90-109ms	Description: The number of average video round trip times between 90 and 109 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-110-129ms	Description: The number of average video round trip times between 110 and 129 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-130-149ms	Description: The number of average video round trip times between 130 and 149 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-150-169ms	Description: The number of average video round trip times between 150 and 169 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-170-189ms	Description: The number of average video round trip times between 170 and 189 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rtt-190-209ms	Description: The number of average video round trip times between 190 and 209 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-210-229ms	Description: The number of average video round trip times between 210 and 229 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-230-249ms	Description: The number of average video round trip times between 230 and 249 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-gteq-250ms	Description: The number of average video round trip times greater than or equal to 250 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-lt-250ms	Description: The number of average video round trip times less than 250 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-250-289ms	Description: The number of average video round trip times between 250 and 289 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rtt-290-329ms	Description: The number of average video round trip times between 290 and 329 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-330-369ms	Description: The number of average video round trip times between 330 and 369 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-370-409ms	Description: The number of average video round trip times between 370 and 409 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-410-449ms	Description: The number of average video round trip times between 410 and 449 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-450-489ms	Description: The number of average video round trip times between 450 and 489 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-490-529ms	Description: The number of average video round trip times between 490 and 529 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rtt-530-569ms	Description: The number of average video round trip times between 530 and 569 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-570-609ms	Description: The number of average video round trip times between 570 and 609 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-610-649ms	Description: The number of average video round trip times between 610 and 649 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-gteq-650ms	Description: The number of average video round trip times greater than or equal to 650 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-lt-650ms	Description: The number of average video round trip times less than 650 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-650-749ms	Description: The number of average video round trip times between 650 and 749 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rtt-750-849ms	Description: The number of average video round trip times between 750 and 849 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-850-949ms	Description: The number of average video round trip times between 850 and 949 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-950-1049ms	Description: The number of average video round trip times between 950 and 1049 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-1050-1149ms	Description: The number of average video round trip times between 1050 and 1149 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-1150-1249ms	Description: The number of average video round trip times between 1150 and 1249 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rtt-1250-1349ms	Description: The number of average video round trip times between 1250 and 1349 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcp1m-video-rtt-1350-1449ms	Description: The number of average video round trip times between 1350 and 1449 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-video-rtt-1450-1549ms	Description: The number of average video round trip times between 1450 and 1549 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-video-rtt-1550-1649ms	Description: The number of average video round trip times between 1550 and 1649 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-video-rtt-gteq-1650ms	Description: The number of average video round trip times greater than or equal to 1650 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-lt-50ms	Description: The number of average non-video round trip times less than 50 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-50-69ms	Description: The number of average non-video round trip times between 50 and 69 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-nonvideo-rtt-70-89ms	Description: The number of average non-video round trip times between 70 and 89 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-90-109ms	Description: The number of average non-video round trip times between 90 and 109 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-110-129ms	Description: The number of average non-video round trip times between 110 and 129 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-130-149ms	Description: The number of average non-video round trip times between 130 and 149 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-150-169ms	Description: The number of average non-video round trip times between 150 and 169 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-170-189ms	Description: The number of average non-video round trip times between 170 and 189 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcp1m-nonvideo-rtt-190-209ms	Description: The number of average non-video round trip times between 190 and 209 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-210-229ms	Description: The number of average non-video round trip times between 210 and 229 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-230-249ms	Description: The number of average non-video round trip times between 230 and 249 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-gteq-250ms	Description: The number of average non-video round trip times greater than or equal to 250 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-lt-250ms	Description: The number of average non-video round trip times less than 250 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-250-289ms	Description: The number of average non-video round trip times between 250 and 289 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-nonvideo-rtt-290-329ms	Description: The number of average non-video round trip times between 290 and 329 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-330-369ms	Description: The number of average non-video round trip times between 330 and 369 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-370-409ms	Description: The number of average non-video round trip times between 370 and 409 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-410-449ms	Description: The number of average non-video round trip times between 410 and 449 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-450-489ms	Description: The number of average non-video round trip times between 450 and 489 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-490-529ms	Description: The number of average non-video round trip times between 490 and 529 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcp1m-nonvideo-rtt-530-569ms	Description: The number of average non-video round trip times between 530 and 569 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-570-609ms	Description: The number of average non-video round trip times between 570 and 609 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-610-649ms	Description: The number of average non-video round trip times between 610 and 649 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-gteq-650ms	Description: The number of average non-video round trip times greater than or equal to 650 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-lt-650ms	Description: The number of average non-video round trip times less than 650 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rtt-650-749ms	Description: The number of average non-video round trip times between 650 and 749 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-nonvideo-rtt-750-849ms	Description: The number of average non-video round trip times between 750 and 849 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-850-949ms	Description: The number of average non-video round trip times between 850 and 949 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-950-1049ms	Description: The number of average non-video round trip times between 950 and 1049 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-1050-1149ms	Description: The number of average non-video round trip times between 1050 and 1149 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-1150-1249ms	Description: The number of average non-video round trip times between 1150 and 1249 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-1250-1349ms	Description: The number of average non-video round trip times between 1250 and 1349 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-nonvideo-rtt-1350-1449ms	Description: The number of average non-video round trip times between 1350 and 1449 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-1450-1549ms	Description: The number of average non-video round trip times between 1450 and 1549 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-1550-1649ms	Description: The number of average non-video round trip times between 1550 and 1649 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rtt-gteq-1650ms	Description: The number of average non-video round trip times greater than or equal to 1650 milliseconds. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-lt-20kbps	Description: The number of average video bit rates less than 20 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-20-39kbps	Description: The number of average video bit rates between 20 and 39 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rate-40-59kbps	Description: The number of average video bit rates between 40 and 59 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-60-79kbps	Description: The number of average video bit rates between 60 and 79 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-80-99kbps	Description: The number of average video bit rates between 80 and 99 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-100-119kbps	Description: The number of average video bit rates between 100 and 119 kbps. For TCP link monitoring. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-120-139kbps	Description: The number of average video bit rates between 120 and 139 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-140-159kbps	Description: The number of average video bit rates between 140 and 159 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcp1m-video-rate-160-179kbps	Description: The number of average video bit rates between 160 and 179 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-video-rate-180-199kbps	Description: The number of average video bit rates between 180 and 199 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-video-rate-200-219kbps	Description: The number of average video bit rates between 200 and 219 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-video-rate-gteq-220kbps	Description: The number of average video bit rates between greater than or equal to 220 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-video-rate-lt-220kbps	Description: The number of average video bit rates between less than 220 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-video-rate-220-259kbps	Description: The number of average video bit rates between 220 and 259 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rate-260-299kbps	Description: The number of average video bit rates between 260 and 299 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-300-339kbps	Description: The number of average video bit rates between 300 and 339 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-340-379kbps	Description: The number of average video bit rates between 340 and 379 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-380-419kbps	Description: The number of average video bit rates between 380 and 419 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-420-459kbps	Description: The number of average video bit rates between 420 and 459 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-460-499kbps	Description: The number of average video bit rates between 460 and 499 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rate-500-539kbps	Description: The number of average video bit rates between 500 and 539 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-540-579kbps	Description: The number of average video bit rates between 540 and 579 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-580-619kbps	Description: The number of average video bit rates between 580 and 619 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-gteq-620kbps	Description: The number of average video bit rates greater than or equal to 620 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-lt-620kbps	Description: The number of average video bit rates less than 620 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-620-719kbps	Description: The number of average video bit rates between 620 and 719 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rate-720-819kbps	Description: The number of average video bit rates between 720 and 819 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-820-919kbps	Description: The number of average video bit rates between 820 and 919 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-920-1019kbps	Description: The number of average video bit rates between 920 and 1019 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-1020-1119kbps	Description: The number of average video bit rates between 1020 and 1119 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-1120-1219kbps	Description: The number of average video bit rates between 1120 and 1219 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-1220-1319kbps	Description: The number of average video bit rates between 1220 and 1319 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-video-rate-1320-1419kbps	Description: The number of average video bit rates between 1320 and 1419 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-1420-1519kbps	Description: The number of average video bit rates between 1420 and 1519 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-1520-1619kbps	Description: The number of average video bit rates between 1520 and 1619 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-video-rate-gteq-1620kbps	Description: The number of average video bit rates greater than or equal to 1620 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-lt-20kbps	Description: The number of average non-video bit rates less than 20 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-20-39kbps	Description: The number of average non-video bit rates between 20 and 39 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-nonvideo-rate-40-59kbps	Description: The number of average non-video bit rates between 40 and 59 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-60-79kbps	Description: The number of average non-video bit rates between 60 and 79 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-80-99kbps	Description: The number of average non-video bit rates between 80 and 99 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-100-119kbps	Description: The number of average non-video bit rates between 100 and 119 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-120-139kbps	Description: The number of average non-video bit rates between 120 and 139 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-140-159kbps	Description: The number of average non-video bit rates between 140 and 159 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcp1m-nonvideo-rate-160-179kbps	Description: The number of average non-video bit rates between 160 and 179 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-180-199kbps	Description: The number of average non-video bit rates between 180 and 199 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-200-219kbps	Description: The number of average non-video bit rates between 200 and 219 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-gteq-220kbps	Description: The number of average non-video bit rates between greater than or equal to 220 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-lt-220kbps	Description: The number of average non-video bit rates between less than 220 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-220-259kbps	Description: The number of average non-video bit rates between 220 and 259 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-nonvideo-rate-260-299kbps	Description: The number of average non-video bit rates between 260 and 299 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-300-339kbps	Description: The number of average non-video bit rates between 300 and 339 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-340-379kbps	Description: The number of average non-video bit rates between 340 and 379 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-380-419kbps	Description: The number of average non-video bit rates between 380 and 419 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-420-459kbps	Description: The number of average non-video bit rates between 420 and 459 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-460-499kbps	Description: The number of average non-video bit rates between 460 and 499 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcp1m-nonvideo-rate-500-539kbps	Description: The number of average non-video bit rates between 500 and 539 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-540-579kbps	Description: The number of average non-video bit rates between 540 and 579 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-580-619kbps	Description: The number of average non-video bit rates between 580 and 619 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-gteq-620kbps	Description: The number of average non-video bit rates greater than or equal to 620 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-lt-620kbps	Description: The number of average non-video bit rates less than 620 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-620-719kbps	Description: The number of average non-video bit rates between 620 and 719 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcplm-nonvideo-rate-720-819kbps	Description: The number of average non-video bit rates between 720 and 819 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-820-919kbps	Description: The number of average non-video bit rates between 820 and 919 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-920-1019kbps	Description: The number of average non-video bit rates between 920 and 1019 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-1020-1119kbps	Description: The number of average non-video bit rates between 1020 and 1119 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-1120-1219kbps	Description: The number of average non-video bit rates between 1120 and 1219 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcplm-nonvideo-rate-1220-1319kbps	Description: The number of average non-video bit rates between 1220 and 1319 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32

Variables	Description	Data Type
tcp1m-nonvideo-rate-1320-1419kbps	Description: The number of average non-video bit rates between 1320 and 1419 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-1420-1519kbps	Description: The number of average non-video bit rates between 1420 and 1519 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-1520-1619kbps	Description: The number of average non-video bit rates between 1520 and 1619 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
tcp1m-nonvideo-rate-gteq-1620kbps	Description: The number of average non-video bit rates greater than or equal to 1620 kbps. For TCP link monitoring. This variable is proprietary. Trigger: This variable get triggered when TCP link monitoring is enabled and the flow is identified as a non-video flow. Availability: TCP link monitoring, which is part of ECS (Enhanced Charging Services), generates this statistic.	Int32
ttl_vbytes_mp4_ios	Description: The total video bytes for MP4 containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_mp4_android	Description: The total video bytes for MP4 containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vbytes_mp4_laptop	Description: The total video bytes for MP4 containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_mp4_unk_ue	Description: The total video bytes for MP4 containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_flv_ios	Description: The total video bytes for FLV (Flash Video) containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_flv_android	Description: The total video bytes for FLV (Flash Video) containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_flv_laptop	Description: The total video bytes for FLV (Flash Video) containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_flv_unk_ue	Description: The total video bytes for FLV (Flash Video) containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_unk_cntnr_ios	Description: The total video bytes for other containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vbytes_unk_cntnr_android	Description: The total video bytes for other containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_unk_cntnr_laptop	Description: The total video bytes for other containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_unk_cntnr_unk_ue	Description: The total video bytes for other containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_mp4_ios	Description: The total video duration for MP4 containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_mp4_android	Description: The total video duration for MP4 containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_mp4_laptop	Description: The total video duration for MP4 containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_mp4_unk_ue	Description: The total video duration for MP4 containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vduration_flv_ios	Description: The total video duration for FLV (Flash Video) containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_flv_android	Description: The total video duration for MP4 containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_flv_laptop	Description: The total video duration for MP4 containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_flv_unk_ue	Description: The total video duration for MP4 containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_unk_cntnr_ios	Description: The total video duration for other containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_unk_cntnr_android	Description: The total video duration for other containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_unk_cntnr_laptop	Description: The total video duration for other containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vduration_unk_cntnr_unk_ue	Description: The total video duration for other containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_mp4_ios	Description: The total video bytes for MP4 containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_mp4_android	Description: The total video bytes for MP4 containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_mp4_laptop	Description: The total video bytes for MP4 containers for laptops. For video analytics. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_mp4_unk_ue	Description: The total video bytes for MP4 containers for other devices. For video analytics. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_flv_ios	Description: The total video bytes for FLV (Flash Video) containers for iPhone/iPad/iPod (iOS) devices. For video analytics. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_flv_android	Description: Total video bytes for MP4 containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_flv_laptop	Description: The total video bytes for MP4 containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_txbytes_flv_unk_ue	Description: The total video bytes for MP4 containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_unk_cntnr_ios	Description: The total video bytes for other containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_unk_cntnr_android	Description: The total video bytes for other containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_unk_cntnr_laptop	Description: The total video bytes for other containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_unk_cntnr_unk_ue	Description: The total video bytes for other containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_mp4_ios	Description: The total videos for MP4 containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_mp4_android	Description: The total videos for MP4 containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_count_mp4_laptop	Description: The total videos for MP4 containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_mp4_unk_ue	Description: The total videos for MP4 containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_flv_ios	Description: The total videos for FLV (Flash Video) containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_flv_android	Description: The total videos for MP4 containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_flv_laptop	Description: The total videos for MP4 containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_flv_unk_ue	Description: The total videos for MP4 containers for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_unk_cntr_ios	Description: The total videos for other containers for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
t1l_video_count_unk_cntnr_android	Description: The total videos for other containers for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_video_count_unk_cntnr_laptop	Description: The total videos for other containers for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_video_count_unk_cntnr_unk_ue	Description: The total videos for other container for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_vbytes_gprs_ios	Description: The total video bytes for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_vbytes_gprs_android	Description: The total video bytes for GPRS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_vbytes_gprs_laptop	Description: The total video bytes for GPRS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_vbytes_gprs_unk_ue	Description: The total video bytes for GPRS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vbytes_ums_ios	Description: The total video bytes for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_ums_android	Description: The total video bytes for UMTS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_ums_laptop	Description: The total video bytes for UMTS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_ums_unk_ue	Description: The total video bytes for UMTS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_lte_ios	Description: The total video bytes for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_lte_android	Description: The total video bytes for LTE Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_lte_laptop	Description: The total video bytes for LTE Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vbytes_lte_unk_ue	Description: The total video bytes for LTE Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_hspa_ios	Description: The total video bytes for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_hspa_android	Description: The total video bytes for HSPA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_hspa_laptop	Description: The total video bytes for HSPA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_hspa_unk_ue	Description: The total video bytes for HSPA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_wlan_ios	Description: The total video bytes for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vbytes_wlan_android	Description: The total video bytes for WLAN Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_wlan_laptop	Description: The total video bytes for WLAN Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_wlan_unk_ue	Description: The total video bytes for WLAN Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_cdma_ios	Description: The total video bytes for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_cdma_android	Description: The total video bytes for CDMA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_cdma_laptop	Description: The total video bytes for CDMA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vbytes_cdma_unk_ue	Description: The total video bytes for CDMA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_unk_rat_ios	Description: The total video bytes for other Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_unk_rat_android	Description: The total video bytes for other Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_unk_rat_laptop	Description: The total video bytes for other Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vbytes_unk_rat_unk_ue	Description: The total video bytes for other Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_gprs_ios	Description: The total video duration for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_gprs_android	Description: The total video duration for GPRS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vduration_gprs_laptop	Description: The total video duration for GPRS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_gprs_unk_ue	Description: The total video duration for GPRS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_ums_ios	Description: The total video duration for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_ums_android	Description: The total video duration for UMTS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_ums_laptop	Description: The total video duration for UMTS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_ums_unk_ue	Description: The total video duration for UMTS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vduration_lte_ios	Description: The total video duration for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_lte_android	Description: The total video duration for LTE Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_lte_laptop	Description: The total video duration for LTE Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_lte_unk_ue	Description: The total video duration for LTE Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_hspa_ios	Description: The total video duration for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_hspa_android	Description: The total video duration for HSPA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vduration_hspa_laptop	Description: The total video duration for HSPA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_hspa_unk_ue	Description: The total video duration for HSPA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_wlan_ios	Description: The total video duration for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_wlan_android	Description: The total video duration for WLAN Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_wlan_laptop	Description: The total video duration for WLAN Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_wlan_unk_ue	Description: The total video duration for WLAN Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_vduration_cdma_ios	Description: The total video duration for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_cdma_android	Description: The total video duration for CDMA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_cdma_laptop	Description: The total video duration for CDMA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_cdma_unk_ue	Description: The total video duration for CDMA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_unk_rat_ios	Description: The total video duration for other Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_vduration_unk_rat_android	Description: The total video duration for other Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
t1l_vduration_unk_rat_laptop	Description: The total video duration for other Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_vduration_unk_rat_unk_ue	Description: The total video duration for other Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_txbytes_gprs_ios	Description: The total video bytes sent for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_txbytes_gprs_android	Description: The total video bytes sent for GPRS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_txbytes_gprs_laptop	Description: The total video bytes sent for GPRS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_txbytes_gprs_unk_ue	Description: The total video bytes sent for GPRS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_txbytes_ums_ios	Description: The total video bytes sent for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_ums_android	Description: The total video bytes sent for UMTS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_ums_laptop	Description: The total video bytes sent for UMTS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_ums_unk_ue	Description: The total video bytes sent for UMTS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_lte_ios	Description: The total video bytes sent for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_lte_android	Description: The total video bytes sent for LTE Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_txbytes_lte_laptop	Description: The total video bytes sent for LTE Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_lte_unk_ue	Description: The total video bytes sent for LTE Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_hspa_ios	Description: The total video bytes sent for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_hspa_android	Description: The total video bytes sent for HSPA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_hspa_laptop	Description: The total video bytes sent for HSPA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_hspa_unk_ue	Description: The total video bytes sent for HSPA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_txbytes_wlan_ios	Description: The total video bytes sent for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_wlan_android	Description: The total video bytes sent for WLAN Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_wlan_laptop	Description: The total video bytes sent for WLAN Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_wlan_unk_ue	Description: The total video bytes sent for WLAN Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_cdma_ios	Description: The total video bytes sent for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_txbytes_cdma_android	Description: The total video bytes sent for CDMA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
t1l_txbytes_cdma_laptop	Description: The total video bytes sent for CDMA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_txbytes_cdma_unk_ue	Description: The total video bytes sent for CDMA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_txbytes_unk_rat_ios	Description: The total video bytes sent for other Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_txbytes_unk_rat_android	Description: The total video bytes sent for other Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_txbytes_unk_rat_laptop	Description: The total video bytes sent for other Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
t1l_txbytes_unk_rat_unk_ue	Description: The total video bytes sent for other Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_session_time_gprs_ios	Description: The total video sessions on time for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_gprs_android	Description: The total video sessions on time for GPRS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_gprs_laptop	Description: The total video sessions on time for GPRS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_gprs_unk_ue	Description: The total video sessions on time for GPRS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_ums_ios	Description: The total video sessions on time for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_ums_android	Description: The total video sessions on time for UMTS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_session_time_ums_laptop	Description: The total video sessions on time for UMTS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_ums_unk_ue	Description: The total video sessions on time for UMTS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_lte_ios	Description: The total video sessions on time for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_lte_android	Description: The total video sessions on time for LTE Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_lte_laptop	Description: The total video sessions on time for LTE Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_lte_unk_ue	Description: The total video sessions on time for LTE Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_session_time_hspa_ios	Description: The total video sessions on time for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_hspa_android	Description: The total video sessions on time for HSPA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_hspa_laptop	Description: The total video sessions on time for HSPA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_hspa_unk_ue	Description: The total video sessions on time for HSPA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_wlan_ios	Description: The total video sessions on time for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_wlan_android	Description: The total video sessions on time for WLAN Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_session_time_wlan_laptop	Description: The total video sessions on time for WLAN Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_wlan_unk_ue	Description: The total video sessions on time for WLAN Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_cdma_ios	Description: The total video sessions on time for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_cdma_android	Description: The total video sessions on time for CDMA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_cdma_laptop	Description: The total video sessions on time for CDMA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_cdma_unk_ue	Description: The total video sessions on time for CDMA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_session_time_unk_rat_ios	Description: The total video sessions on time for other Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_unk_rat_android	Description: The total video sessions on time for other Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_unk_rat_laptop	Description: The total video sessions on time for other Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_session_time_unk_rat_unk_ue	Description: The total video sessions on time for other Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_gprs_ios	Description: The total TCP video flow count for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_gprs_android	Description: The total TCP video flow count for GPRS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_tcp_flow_gprs_laptop	Description: The total TCP video flow count for GPRS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_gprs_unk_ue	Description: The total TCP video flow count for GPRS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_umts_ios	Description: The total TCP video flow count for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_umts_android	Description: The total TCP video flow count for UMTS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_umts_laptop	Description: The total TCP video flow count for UMTS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_umts_unk_ue	Description: The total TCP video flow count for UMTS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_tcp_flow_lte_ios	Description: The total TCP video flow count for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_lte_android	Description: The total TCP video flow count for LTE Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_lte_laptop	Description: The total TCP video flow count for LTE Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_lte_unk_ue	Description: The total TCP video flow count for LTE Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_hspa_ios	Description: The total TCP video flow count for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_hspa_android	Description: The total TCP video flow count for HSPA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_tcp_flow_hspa_laptop	Description: The total TCP video flow count for HSPA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_hspa_unk_ue	Description: The total TCP video flow count for HSPA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_wlan_ios	Description: The total TCP video flow count for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_wlan_android	Description: The total TCP video flow count for WLAN Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_wlan_laptop	Description: The total TCP video flow count for WLAN Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_wlan_unk_ue	Description: The total TCP video flow count for WLAN Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_tcp_flow_cdma_ios	Description: The total TCP video flow count for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_cdma_android	Description: The total TCP video flow count for CDMA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_cdma_laptop	Description: The total TCP video flow count for CDMA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_cdma_unk_ue	Description: The total TCP video flow count for CDMA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_unk_rat_ios	Description: The total TCP video flow count for other Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_tcp_flow_unk_rat_android	Description: The total TCP video flow count for other Radio Access Type for Android devices. For video analytics. This variable is proprietary.	Int64
ttl_video_tcp_flow_unk_rat_laptop	Description: The total TCP video flow count for other Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_tcp_flow_unk_rat_unk_ue	Description: The total TCP video flow count for other Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_gprs_ios	Description: The total video object count for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_gprs_android	Description: The total video object count for GPRS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_gprs_laptop	Description: The total video object count for GPRS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_gprs_unk_ue	Description: The total video object count for GPRS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_ums_ios	Description: The total video object count for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_count_umts_android	Description: The total video object count for UMTS Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_umts_laptop	Description: The total video object count for UMTS Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_umts_unk_ue	Description: The total video object count for UMTS Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_lte_ios	Description: The total video object count for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_lte_android	Description: The total video object count for LTE Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_lte_laptop	Description: The total video object count for LTE Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_count_lte_unk_ue	Description: The total video object count for LTE Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_hspa_ios	Description: The total video object count for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_hspa_android	Description: The total video object count for HSPA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_hspa_laptop	Description: The total video object count for HSPA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_hspa_unk_ue	Description: The total video object count for HSPA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_wlan_ios	Description: The total video object count for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
ttl_video_count_wlan_android	Description: The total video object count for WLAN Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_wlan_laptop	Description: The total video object count for WLAN Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_wlan_unk_ue	Description: The total video object count for WLAN Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_cdma_ios	Description: The total video object count for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_cdma_android	Description: The total video object count for CDMA Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
ttl_video_count_cdma_laptop	Description: The total video object count for CDMA Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64

Variables	Description	Data Type
tfl_video_count_cdma_unk_ue	Description: The total video object count for CDMA Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
tfl_video_count_unk_rat_ios	Description: The total video object count for other Radio Access Type for iPhone/iPad/iPod (iOS) devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
tfl_video_count_unk_rat_android	Description: The total video object count for other Radio Access Type for Android devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
tfl_video_count_unk_rat_laptop	Description: The total video object count for other Radio Access Type for laptops. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
tfl_video_count_unk_rat_unk_ue	Description: The total video object count for other Radio Access Type for other devices. For video analytics. This variable is proprietary. Trigger: This variable get triggered for each downloaded video when the video information is timed out from the MVG cache. Availability: Video analytics generates this statistic.	Int64
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 46

NAT Realm Schema Statistics

The NAT Realm schema provides operational statistics that can be used for monitoring and troubleshooting the following products: NAT in-line service, SCM

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 46. Bulk Statistic Variables in the NAT Realm Schema

Variables	Description	Data Type
vpnname	Name of the VPN context. This is a key variable. Type: Information	String

Variables	Description	Data Type
realmname	Name of the realm. Collected per context per realm. This is a key variable. Type: Information	String
nat-bind-updates	Description: Total binding updates sent to AAA. Collected per context per realm. Triggers: Increments when the port chunk allocates or deallocates, and an update is sent to AAA. Availability: Per Active Charging Service.	Int32
nat-rlm-bytes-tx	Description: Total number of bytes transferred by realm. Collected per context per realm. Triggers: Increments when the packets are transmitted using this NAT realm. Availability: Per Active Charging Service.	Int32
nat-rlm-flows	Description: Total number of flows used by realm. Collected per context per realm. Triggers: Increments when the new flows use this NAT realm. Availability: Per Active Charging Service.	Int32
nat-rlm-ip-denied	Description: Total number of flows denied IP. Collected per context per realm. Triggers: Increments when the new NAT IP is not available for translation to new flows. Availability: Per Active Charging Service.	Int32
nat-rlm-port-denied	Description: Total number of flows denied ports. Collected per context per realm. Triggers: Increments when the new NAT port is not available for translation to new flows. Availability: Per Active Charging Service.	Int32
nat-rlm-ttl-ips	Description: Total number of NAT public IP addresses. Collected per context per realm. Availability: Per Active Charging Service. Type: Gauge	Int32
nat-rlm-ips-in-use	Description: Total number of NAT public IP addresses currently in use. Collected per context. Triggers: Increments when a new NAT IP address is used by any subscriber. Availability: Per Active Charging Service. Type: Gauge	Int32
nat-rlm-current-users	Description: Total number of current users using a NAT realm. Collected per context per realm. Triggers: Increments when a new subscriber uses the NAT IP from this realm and decrements on releasing the NAT IP address. Availability: Per Active Charging Service. Type: Gauge	Int32
nat-rlm-ttl-port-chunks	Description: Total number of port chunks. Collected per context per realm. Availability: Per Active Charging Service. Type: Gauge	Int32
nat-rlm-chunks-in-use	Description: Total number of port chunks currently in use. Collected per context per realm. Triggers: Increments when a new flow takes new port chunk and decrements on releasing the chunk. Availability: Per Active Charging Service. Type: Gauge	Int32
nat-rlm-port-chunk-size	Description: The size of the port chunk in the NAT realm. This is a snapshot statistic. Availability: Per Active Charging Service. Type: Gauge	Int32

Variables	Description	Data Type
nat-rlm-port-chunk-average-usage-tcp	Description: The average TCP port usage in the allocated TCP ports, i.e out of allocated TCP ports how many got used. This is not a percentage value. This is a snapshot statistic. Triggers: Increments during TCP flows creation and existing network conditions. Availability: Per Active Charging Service. Type: Gauge	Int32
nat-rlm-port-chunk-average-usage-udp	Description: The average UDP port usage in the allocated UDP ports, i.e out of allocated UDP ports how many got used. This is not a percentage value. This is a snapshot statistic. Triggers: Increments during UDP flows creation and existing network conditions. Availability: Per Active Charging Service. Type: Gauge	Int32
nat-rlm-port-chunk-average-usage-others	Description: The average Others (ICMP or GRE) port usage in the allocated others ports, i.e out of allocated 'Others' ports how many got used. This is not a percentage value. This is a snapshot statistic. Triggers: Increments during ICMP or GRE flows creation and existing network conditions. Availability: Per Active Charging Service. Type: Gauge	Int32
nat-rlm-max-port-chunk-subs	Description: Total number of subscribers who have used maximum number of port chunks. This is a cumulative statistic. Triggers: Increments when any subscriber uses maximum number of port chunks. Availability: Per Active Charging Service.	Int64
nat-rlm-max-port-chunk-used	Description: The maximum number of port chunks used by any subscriber. This is a cumulative statistic. Triggers: Increments when any subscriber uses new maximum number of port chunks. Availability: Per Active Charging Service.	Int32
nat-rlm-max-cur-port-chunk-subs	Description: Total number of current subscribers using maximum number of port chunks. This is a snapshot statistic. Triggers: Increments when the active subscriber uses maximum number of port chunks. Availability: Per Active Charging Service. Type: Gauge	Int64
nat-rlm-max-cur-port-chunk-used	Description: The maximum number of port chunks currently used by any subscriber. This is a snapshot statistic. Triggers: Increments when the active subscriber uses new maximum number of port chunks. Availability: Per Active Charging Service. Type: Gauge	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 47

PCC-AF Schema Statistics

The PCC-AF schema provides operational statistics that can be used for monitoring and troubleshooting the following products from StarOS Release 12.1 onward: IPCF.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 47. Bulk Statistic Variables in the PCC-AF Schema

Variables	Description	Data Type
vpnname	The name of the context in which PCC-AF service is configured. This is a key variable.	String
vpnid	The identity number of the context in which PCC-AF service is configured. This is a key variable.	String

Variables	Description	Data Type
servname	The name of the PCC-AF service for which statistics are collected or displayed. This is a key variable.	String
servid	The identity number of the PCC-AF service for which statistics are collected or displayed. This is a key variable.	String
total-rx-inbound-msgs	Indicates the total number of Rx messages received. Trigger: When a Rx message arrives at IPCF. Trigger: When a Rx message arrives at IPCF. Availability: Across all PCC App Services.	Unsigned Int32
total-rx-outbound-msgs	Indicates the total number of Rx messages sent. Trigger: When a Rx message is sent by IPCF to peer. Availability: Across all PCC App Services.	Unsigned Int32
total-rx-aar-rcvd	Indicates the total number of Rx AAR messages received. Trigger: When Rx AAR received. Availability: Across all PCC App Services.	Unsigned Int32
total-rx-aar-accept-sent	Indicates the total number of Rx AAR messages accepted. Trigger: When Rx AAR accepted with AAA with success code. Availability: Across all PCC App Services.	Unsigned Int32
total-rx-ccri-rcvd	Indicates the total number of Rx STR messages received. Trigger: When IPCF received a Rx STR. Availability: Across all PCC App Services.	Unsigned Int32
total-rx-ccai-accept-sent	Indicates the total number of Rx STR messages received. Trigger: When IPCF accepts a STR with STA with success code. Availability: Across all PCC App Services.	Unsigned Int32
total-rx-rar-sent	Indicates the total number of Rx RAR request sent. Trigger: When IPCF sends a RAR on Rx. Availability: Across all PCC App Services.	Unsigned Int32
total-rx-raa-rcvd	Indicates the total number of Rx RAA responses received. Trigger: When IPCF received a RAR response. Availability: Across all PCC App Services.	Unsigned Int32
total-rx-asr-sent	Indicates the total number of Rx ASR request sent. Trigger: When IPCF sends a ASR on Rx. Availability: Across all PCC App Services.	Unsigned Int32
total-rx-asa-rcvd	Indicates the total number of Rx ASA responses received. Trigger: When IPCF received a ASA response. Availability: Across all PCC App Services.	Unsigned Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 48

PCC-Policy Schema Statistics

The PCC-Policy schema provides operational statistics that can be used for monitoring and troubleshooting the following products from StarOS Release 12.1 onward: IPCF.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 48. Bulk Statistic Variables in the PCC-Policy Schema

Variables	Description	Data Type
vpnname	The name of the context in which PCC-Policy service is configured. This is a key variable.	String
vpnid	The identity number of the context in which PCC-Policy service is configured. This is a key variable.	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
servname	The name of the PCC - Policy service for which statistics are collected or displayed. This is a key variable.	String
servid	The identity number of the PCC - Policy service for which statistics are collected or displayed. This is a key variable.	Unsigned Int32
total-gx-inbound-msgs	Indicates the total number of Gx messages received. Trigger: When a Gx message arrives at IPCF. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-outbound-msgs	Indicates the total number of Gx messages sent. Trigger: When a Gx message is sent by IPCF to peer. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccr-rcvd	Indicates the total number of Gx CCR messages received. Trigger: When Gx CCR I/U/T received. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccr-rej-sent	Indicates the total number of Gx CCR messages rejected. Trigger: When Gx CCR rejected with CCA with respective error code. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-cca-accept-sent	Indicates the total number of Gx CCA messages scepted successfully. Trigger: When Gx CCR accepted with CCA with success code. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccri-rcvd	Indicates the total number of Gx CCR-I messages received. Trigger: When IPCF received a Gx CCR-I. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccai-rej-sent	Indicates the total number of Gx CCA-I messages sent with error response. Trigger: When IPCF rejects a CCR-I with CCA with respective error code. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccai-accept-sent	Indicates the total number of Gx CCA-I messages sent with success response. Trigger: When IPCF accepts a CCR-I with CCA with success code. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccru-rcvd	Indicates the total number of Gx CCR-U messages received. Trigger: When IPCF received a Gx CCR-U. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccru-rej-sent	Indicates the total number of Gx CCA-U messages sent with error response. Trigger: When IPCF rejects a CCR-U with CCA with respective error code. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccru-accept-sent	Indicates the total number of Gx CCA-U messages sent with success response. Trigger: When IPCF accepts a CCR-U with CCA with success code. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccrt-rcvd	Indicates the total number of Gx CCR-T messages received. Trigger: When IPCF received a Gx CCR-T. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccrt-rej-sent	Indicates the total number of Gx CCA-T messages sent with error response. Trigger: When IPCF rejects a CCR-T with CCA with respective error code. Availability: Across all PCC Policy Services.	Unsigned Int32

Variables	Description	Data Type
total-gx-ccrt-accept-sent	Indicates the total number of Gx CCA-T messages sent with success response. Trigger: When IPCF accepts a CCR-T with CCA with success code. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-unknown-ccr-rcvd	Indicates the total number of Gx Unknown CCR messages received. Trigger: When Unknown CCR sent to IPCF. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-unknown-ccr-rej	Indicates the total number of Gx unknown CCR messages rejected. Trigger: When IPCF rejects the unknown CCR with CCA with respective error code. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-rar-sent	Indicates the total number of Gx RAR request sent. Trigger: When IPCF sends a RAR on Gx. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-raa-rcvd	Indicates the total number of Gx RAA responses received. Trigger: When IPCF received a RAR response. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-rar-timeouts	Indicates the total number of Gx RAR timeouts. Trigger: When RAR times out. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-raa-parse-success	Indicates the total number of Gx RAA parse success messages. Trigger: When RAA AVP parsing is successful. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-raa-parse-fail	Indicates the total number of Gx RAA parse fail. Trigger: When RAA AVP parsing fails. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-cca-sent	Indicates the total number of Gx-CCA messages sent in response to CCR. Trigger: When IPCF sends a CCA message. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccai-sent	Indicates the total number of Gx-CCA-I messages sent in response to CCR-I. Trigger: When IPCF sends a CCA-I message. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccau-sent	Indicates the total number of Gx-CCA-U messages sent in response to CCR-U. Trigger: When IPCF sends a CCA-U message. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-ccat-sent	Indicates the total number of Gx-CCA-T messages sent in response to CCR-T. Trigger: When IPCF sends a CCA-T message. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-rar-sess-release	Indicates the total number of Gx RAR messages sent for Session Release. Trigger: When IPCF sends RAR message to PCEF with Session-Release Cause AVP to request a session release. Availability: Across all PCC Policy Services.	Unsigned Int32
total-gx-raa-success-code	Indicates the total number of Gx RAA messages sent with Result-Code as SUCCESS. Trigger: When IPCF receives RAA message with Result-Code as SUCCESS in response to an RAR. Availability: Across all PCC Policy Services.	Unsigned Int32

Variables	Description	Data Type
total-gx-raa-failure-code	Indicates the total number of Gx RAA messages sent with Result-Code other than SUCCESS. Trigger: When IPCF receives RAA message with Result-Code other than SUCCESS in response to an RAR. Availability: Across all PCC Policy Services.	Unsigned Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 49

PCC-Sp-Endpoint Schema Statistics

The PCC-Sp-Endpoint schema provides operational statistics that can be used for monitoring and troubleshooting the following products from StarOS Release 12.1 onward: IPCF.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.



Important: Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 49. Bulk Statistic Variables in the PCC-Sp-Endpoint Schema

Variables	Description	Data Type
vpnname	The name of the context in which PCC-Sp-Endpoint is configured. This is a key variable.	String
vpnid	The identity number of the context in which PCC-Sp-Endpoint is configured. This is a key variable.	String

Variables	Description	Data Type
endpt-name	The name of the PCC-Sp-Endpoint instance for which statistics are collected or displayed. This is a key variable.	String
req-open	Indicates total number of SPRMgr Sh session Create requests received from PCCMgr. Trigger: When SPRMgr receives a first GET profile request for a session. Availability: Across all PCC SP Endpoints.	Unsigned Int32
req-close	Indicates total number of SPRMgr Sh session Close requests received from PCCMgr. Trigger: When SPRMgr receives the last notification de-registration request or session close request. Availability: Across all PCC SP Endpoints.	Unsigned Int32
req-update-profile	Indicates total number of requests received from PCCMgr to send PUR to SSC. Trigger: When SPRMgr gets a request from PCCMgr to send PUR to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
req-update-profile-answer	Indicates total number of PUA received from SSC. Trigger: When SPRMgr receives a PUA message from SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
req-user-data-req	Indicates total number of requests received from PCCMgr to send UDR to SSC. Trigger: When SPRMgr gets a request from PCCMgr to send UDR to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
req-user-data-answer	Indicates total number of UDA received from SSC. Trigger: When SPRMgr receives a UDA message from SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
req-push-notif-req	Indicates total number of PNRs received. Trigger: When IPCF receives a PNR message from SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
req-push-notif-answer	Indicates total number of PNA received from PCCMgr. Trigger: After successful parsing of PNR message and before sending the PNA message out. Availability: Across all PCC SP Endpoints.	Unsigned Int32
req-subscr-notif-req	Indicates total number of requests received from PCCMgr to send PNR to SSC. Trigger: When IPCF receives a SNR message from SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
req-subscr-notif-answer	Indicates total number of SNAs sent. Trigger: When SPRMgr receives a SNA message from SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
success-open	Indicates total number of SPRMgr Sh sessions successfully created. Trigger: When SPRMgr has successfully created a Sh session. Availability: Across all PCC SP Endpoints.	Unsigned Int32
success-close	Indicates total number of SPRMgr Sh sessions successfully closed. Trigger: When SPRMgr has successfully closed a Sh session. Availability: Across all PCC SP Endpoints.	Unsigned Int32

Variables	Description	Data Type
success-update-profile	Indicates total number of PUR successfully sent to SSC. Trigger: When a PUR message is successfully sent from IPCF to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
success-update-profile-answer	Indicates total number of PUA successfully parsed and their data sent to PCCMgr. Trigger: When the PUA message received from SSC is successfully parsed. Availability: Across all PCC SP Endpoints.	Unsigned Int32
success-user-data-req	Indicates total number of UDR successfully sent to SSC. Trigger: When a UDR message is successfully sent from IPCF to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
success-user-data-answer	Indicates total number of UDA successfully parsed and their data sent to PCCMgr. Trigger: When the UDA message received from SSC is successfully parsed. Availability: Across all PCC SP Endpoints.	Unsigned Int32
success-push-notif-req	Indicates total number of PNR successfully sent to SSC. Trigger: When the PNR message received from SSC is successfully parsed. Availability: Across all PCC SP Endpoints.	Unsigned Int32
success-push-notif-answer	Indicates total number of PNA successfully parsed and their data sent to PCCMgr. Trigger: When a PNA message is successfully sent from IPCF to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
success-subscr-notif-req	Indicates total number of SNR successfully sent to SSC. Trigger: When a SNR message is successfully sent from IPCF to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
success-subscr-notif-answer	Indicates total number of SNA successfully parsed and their data sent to PCCMgr. Trigger: When the SNA message received from SSC is successfully parsed. Availability: Across all PCC SP Endpoints.	Unsigned Int32
error-open	Indicates total number of SPRMgr Sh session create failures. Trigger: When SPRMgr session creation fails. Availability: Across all PCC SP Endpoints.	Unsigned Int32
error-close	Indicates total number of SPRMgr Sh session close failures. Trigger: When SPRMgr session close fails. Availability: Across all PCC SP Endpoints.	Unsigned Int32
error-update-profile	Indicates total number of errors occurred while sending PUR. Trigger: When an error occurs while sending PUR message to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
error-update-profile-answer	Indicates total number of errors occurred while processing PUA. Trigger: When an error occurs while processing PUA message received from SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
error-user-data-req	Indicates total number of errors occurred while sending UDR. Trigger: When an error occurs while sending UDR message to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
error-user-data-answer	Indicates total number of errors occurred while processing UDA. Trigger: When an error occurs while processing UDA message received from SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32

Variables	Description	Data Type
error-push-notif-req	Indicates total number of errors occurred while processing PNR. Trigger: When an error occurs while processing PNR message received from SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
error-push-notif-answer	Indicates total number of errors occurred while sending PNA. Trigger: When an error occurs while sending PNA message to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
error-subscr-notif-req	Indicates total number of errors occurred while sending SNR. Trigger: When an error occurs while sending SNR message to SSC. Availability: Across all PCC SP Endpoints.	Unsigned Int32
error-subscr-notif-answer	Indicates total number of errors occurred while processing SNA. Trigger: When an error occurs while processing SNA message received from SSC. Availability: Across all PCC SP Endpoints	Unsigned Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 50

PCC Service Schema Statistics

The PCC Service schema provides operational statistics that can be used for monitoring and troubleshooting the following products from StarOS Release 12.1 onward: IPCF.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 50. Bulk Statistic Variables in the PCC Service Schema

Variables	Description	Data Type
vpnname	The name of the context in which PCC service is configured. This is a key variable.	String
vpnid	The identity number of the context in which PCC service is configured. This is a key variable.	String

Variables	Description	Data Type
servname	The name of the PCC service for which statistics are collected or displayed. This is a key variable.	String
servid	The identity number of the PCC service for which statistics are collected or displayed. This is a key variable.	String
total-gx-processed	Indicates the total number of Gx request processed by PCC. Trigger: When Gx request is processed by PCC. Availability: Availability: Across all PCC Services.	Unsigned Int32
total-gy-processed	Indicates the total number of Gy request processed by PCC. Trigger: When Gy request is processed by PCC. Availability: Availability: Across all PCC Services.	Unsigned Int32
total-spr-processed	Indicates the total number of SSC request processed by PCC. Trigger: When SPR responded is processed by PCC. Availability: Availability: Across all PCC Services.	Unsigned Int32
total-unknown-req	Indicates the total number of unknown request received at PCC. Trigger: When sent to PCC is unknown. Availability: Availability: Across all PCC Services.	Unsigned Int32
total-pur-updates	Indicates the total number of profile update request sent by PCC. Trigger: When IPCF wants to update quota on SSC. Availability: Availability: Across all PCC Services.	Unsigned Int32
total-snr-requests	Indicates the total number of subscriber notification request processed by PCC. Trigger: When IPCF wants to ask for Subscriber information from SSC. Availability: Across all PCC Services.	Unsigned Int32
total-pnr-requests	Indicates the total number of profile notification request processed by PCC. Trigger: When subscriber profile is updated at SSC. Availability: Across all PCC Services.	Unsigned Int32
total-profile-match-hits	Indicates the total number profiles matched. Trigger: When profile requested by interfaces is matched. Availability: Across all PCC Services.	Unsigned Int32
total-profile-match-miss	Indicates the total number of profiles that did not match. Trigger: When profile requested by interfaces does not match. Availability: Across all PCC Services.	Unsigned Int32
total-quota-reports	Indicates the total number of quote reports generated by PCC. Trigger: When IPCF processes quota request on Gy interface. Availability: Across all PCC Services.	Unsigned Int32
total-unknown-rt-req	Indicates the total number of unknown rating group requested. Trigger: When an unknown rating group is reported by Gy. Availability: Across all PCC Services.	Unsigned Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 51

PDG Schema Statistics

The PDG schema provides operational statistics that can be used for monitoring and troubleshooting the following products: PDG/TTG

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 51. Bulk Statistic Variables in the PDG Schema

Variables	Description	Data Type

Variables	Description	Data Type
vpnname	Description: The name of the context currently facilitating the service processing the subscriber session. This is a key variable. This variable is proprietary. Availability: IPSec/SSL.	String
vpnid	Description: The identification number of the context currently facilitating the service processing the subscriber session. This is an internal reference number. This is a key variable. This variable is proprietary. Availability: IPSec/SSL.	Int32
svcname	Description: The service name for which PDG statistics are being displayed. This is a key variable. This variable is proprietary. Availability: IPSec/SSL.	String
svcid	Description: The service ID for which PDG statistics are being displayed. This is a key variable. This variable is proprietary. Availability: IPSec/SSL.	Int32
bindaddress	Description: The bind IP address for this PDG service. This variable is proprietary. Availability: IPSec/SSL.	String
state	Description: System-wide PDG state identified by the following codes: - inservice(1): The PDG service is started (active). - outofservice(2): The PDG service is not started. It is in the initial state (inactive). This variable is proprietary. Availability: IPSec/SSL.	String
sess-ttlcursess	Description: Number of total current sessions. This variable is proprietary. Availability: IPSec/SSL. Type: Gauge	Int32
sess-curact	Description: Number of currently active PDG sessions. This variable is proprietary. Trigger: Increments on receiving a new call request from the UE. For IPSec, it increments after receiving an IKE_INIT message from the UE. For SSL, it increments after the SSL tunnel is established. Availability: IPSec/SSL. Type: Gauge	Int32
sess-curdorm	Description: Number of currently dormant PDG sessions. This variable is proprietary. Trigger: For SSL, it represents those subscribers wherein the TCP connection is up but the SSL tunnel is not yet up. Availability: SSL. Type: Gauge	Int32

Variables	Description	Data Type
sess-curactipv4	Description: Number of currently active IPv4 sessions. This variable is proprietary. Availability: IPsec/SSL. Type: Gauge	Int32
sess-curdormipv4	Description: Number of currently dormant IPv4 sessions. This variable is proprietary. Availability: IPsec/SSL. Type: Gauge	Int32
sess-curactipv6	Description: Number of currently active IPv6 sessions. This variable is proprietary. Availability: IPsec/SSL. Type: Gauge	Int32
sess-curdormipv6	Description: Number of currently dormant IPv6 sessions. This variable is proprietary. Availability: IPsec/SSL. Type: Gauge	Int32
sess-curdiripv4	Description: Number of current direct IP IPv4 sessions. This variable is proprietary. Availability: IPsec/SSL. Type: Gauge	Int32
sess-curttgipv4	Description: Number of current TTG IPv4 sessions. This variable is proprietary. Availability: IPsec/SSL. Type: Gauge	Int32
sess-ttlidiripv4	Description: Total number of direct IP IPv4 sessions. This variable is proprietary. Trigger: Increments upon successful IPv4 PDG mode call setup. Availability: IPsec/SSL. Type: Gauge	Int32
sess-ttlttgipv4	Description: Total number of TTG IPv4 sessions. This variable is proprietary. Trigger: Increments upon successful IPv4 TTG mode call setup. Availability: IPsec/SSL.	Int32
sess-diripv4succ	Description: Number of direct IP IPv4 successful sessions. This variable is proprietary. Trigger: Increments upon successful IPv4 PDG mode call setup. Availability: IPsec/SSL.	Int32
sess-diripv4attempt	Description: Number of direct IP IPv4 attempted sessions. This variable is proprietary. Trigger: Increments upon receiving an IKE_INIT message from the UE in IPsec and a TCP SYN message from the UE in SSL. Availability: IPsec/SSL.	Int32

Variables	Description	Data Type
sess-diripv4attemptfail	Description: Number of direct IP IPv4 attempted sessions that failed. This variable is proprietary. Trigger: Increments upon a session setup timeout and authentication failure scenario in PDG mode IPv4 call setup. Availability: IPSec/SSL.	Int32
sess-ttgv4succ	Description: Number of direct TTG IPv4 successful sessions. This variable is proprietary. Trigger: Increments upon a successful IPv4 TTG mode call setup. Availability: IPSec/SSL.	Int32
sess-ttgv4attempt	Description: Number of direct TTG IPv4 attempted sessions. This variable is proprietary. Trigger: Increments upon receiving an IKE_INIT message from the UE in IPsec and a TCP SYN message from the UE in SSL TTG mode. Availability: IPSec/SSL.	Int32
sess-ttgv4attemptfail	Description: Number of direct TTG IPv4 attempted sessions that failed. This variable is proprietary. Trigger: Increments upon a session setup timeout and authentication failure scenario in PDG mode IPv4 call setup. Availability: IPSec/SSL.	Int32
sess-ttlsetup	Description: Total number of sessions set up. This variable is proprietary. Trigger: Increments upon sending a successful IKE_AUTH CFG response to the UE in IPsec, and upon a successful call setup with an MT_CLOSE message sent to the UE in SSL. Availability: IPSec/SSL.	Int32
sess-ttlattempt	Description: Total number of session attempted. This variable is proprietary. Trigger: Increments upon receiving an IKE_INIT message from the UE in IPsec and a TCP SYN message in SSL TTG mode. Availability: IPSec/SSL.	Int32
sess-ttlattemptfail	Description: Total number of session attempts failed. This variable is proprietary. Trigger: Increments upon session setup timeout and authentication failure scenario or a resource unavailable scenario where the subscriber allocation fails. Availability: IPSec/SSL.	Int32
sess-ttldisc	Description: Total number of sessions disconnected. Trigger: Increments after call is up during re-authentication failure (IPsec only) and the SSL or IPsec tunnel goes down. This variable is proprietary.	Int32
sess-ttldisclocal	Description: Total number of sessions disconnected locally. This variable is proprietary. Trigger: Increments by unavailable resources and session setup timeout. Availability: IPSec/SSL.	Int32

Variables	Description	Data Type
sess-ttl discremote	Description: Total number of sessions disconnected remotely. This variable is proprietary. Trigger: Increments on UE-initiated call tear down after call setup. Availability: IPSec/SSL.	Int32
sess-discbeforeconn	Description: Sessions remotely disconnected before connected. This variable is proprietary. Trigger: Increments on UE-initiated call tear down before call setup. Availability: IPSec/SSL.	Int32
sess-ttl fastreauthsucc	Description: Total fast re-authentication successes. This variable is proprietary. Trigger: Increments upon re-authentication success scenario. Includes both fast re-authentication and pseudoname re-authentication. Availability: IPSec.	Int32
sess-ttl fastreauthattempt	Description: Total fast re-authentication attempts. This variable is proprietary. Trigger: Increments upon receiving the re-auth ID in the IKE-AUTH message from the UE. Includes both fast re-authentication and pseudoname re-authentication. Availability: IPSec.	Int32
sess-ttl fastreauthattemptfail	Description: Total fast re-authentication attempts that failed. This variable is proprietary. Trigger: Increments upon a re-authentication success scenario from the AAA server. Includes both fast re-authentication and pseudoname re-authentication. Availability: IPSec.	Int32
sess-ttl reauthorizesucc	Description: Total reauthorization attempts that succeeded. This variable is proprietary. Trigger: Increments upon receiving an authorize success message from the AAA server. Availability: IPSec.	Int32
sess-ttl reauthorizeattempt	Description: Total reauthorization attempts. This variable is proprietary. Trigger: Increments upon sending an authorize request message to the AAA server. Availability: IPSec.	Int32
sess-ttl reauthorizeattemptfail	Description: Total reauthorization attempts that failed. This variable is proprietary. Trigger: Increments upon an authorization failure with the AAA server or if the IPSec tunnel goes down during authorization. Availability: IPSec.	Int32
sess-ttl primaryaaasucc	Description: Total primary AAA sessions that succeeded. This variable is proprietary. Trigger: Increments upon receiving an access accept message from the AAA server. (Increments only during primary authentication if multiple authentication is supported in IPSec). Availability: IPSec/SSL.	Int32

Variables	Description	Data Type
sess-ttlprimaryaaaattempt	Description: Total primary AAA sessions attempted. This variable is proprietary. Trigger: Increments upon receiving an IKE -AUTH message from the UE in IPsec and an MT-AUTH message from the UE in SSL. Availability: IPsec/SSL.	Int32
sess-ttlprimaryaaaattemptfail	Description: Total primary AAA sessions that failed. This variable is proprietary. Trigger: Increments on an authentication failure and if the SSL or IPsec tunnel goes down during authentication. Availability: IPsec/SSL.	Int32
sess-tlexternalaaaasucc	Description: Total external AAA sessions that succeeded. This variable is proprietary. Trigger: Increments upon receiving an authentication success message from the AAA server in a multiple authentication scenario. Availability: IPsec.	Int32
sess-tlexternalaaaattempt	Description: Total external AAA sessions that attempted. This variable is proprietary. Trigger: Increments upon receiving an IKE-AUTH (ANOTHER-AUTH-FOLLOWS) message from the UE in a multiple authentication scenario. Availability: IPsec.	Int32
sess-tlexternalaaaattemptfail	Description: Total external AAA sessions that failed. This variable is proprietary. Trigger: Increments upon receiving an authentication failure from the AAA server or an IPsec tunnel tear down in a multiple authentication scenario. Availability: IPsec.	Int32
sess-ttleapauthsucc	Description: Total of successful EAP authorizations. This variable is proprietary. Trigger: Increments upon receiving an authentication success message from the AAA server for the second phase authentication using EAP. (Applicable only in a multiple authentication scenario.) Availability: IPsec.	Int32
sess-ttleapauthfail	Description: Total of failed EAP authorizations. This variable is proprietary. Trigger: Increments upon receiving an authentication failure message from the AAA server for the second phase authentication using EAP. (Applicable only in a multiple authentication scenario.) Availability: IPsec.	Int32
sess-ttlpapauthsucc	Description: Total of successful PAP authorizations. This variable is proprietary. Trigger: Increments upon receiving an authentication success message from the AAA server for the second phase authentication using PAP. (Applicable only in a multiple authentication scenario.) Availability: IPsec.	Int32

Variables	Description	Data Type
sess-ttlpapauthfail	Description: Total of failed PAP authorizations. This variable is proprietary. Trigger: Increments upon receiving an authentication failure message from the AAA server for the second phase authentication using PAP. (Applicable only in a multiple authentication scenario.) Availability: IPSec.	Int32
sess-ttlchapauthsucc	Description: Total of successful CHAP authorizations. This variable is proprietary. Trigger: Increments upon receiving an authentication success message from the AAA server for the second phase authentication using CHAP. (Applicable only in a multiple authentication scenario.) Availability: IPSec.	Int32
sess-ttlchapauthfail	Description: Total of failed CHAP authorizations. This variable is proprietary. Trigger: Increments upon receiving an authentication failure message from the AAA server for the second phase authentication using CHAP. (Applicable only in a multiple authentication scenario.) Availability: IPSec.	Int32
sess-discremote	Description: Number of sessions terminated by a remote disconnect. This variable is proprietary. Trigger: A TCP failure scenario in SSL PDG and SSL TTG after the call is in the CONNECTED state. A UE-initiated session disconnect in IPSec PDG and IPSec TTG after the call is in the CONNECTED state. Availability: IPSec/SSL.	Int32
sess-attemptfaildiscremote	Description: Number of sessions terminated by a Session Attempt Failed disconnect reason due to a remote disconnect. Trigger: A TCP failure scenario in SSL PDG and SSL TTG before the call is in the CONNECTED state. A UE-initiated session disconnect in IPSec PDG and IPSec TTG before the call is in the CONNECTED state. Availability: IPSec/SSL.	Int32
sess-discadmin	Description: Number of sessions terminated because of an admin release. This variable is proprietary. Trigger: Incremented for all sessions in a CONNECTED state that are cleared due to an Admin Disconnect disconnect reason. Availability: IPSec/SSL.	Int32
sess-attemptfaildiscadmin	Description: Number of sessions terminated by a Session Attempt Failed disconnect reason due to an admin disconnect. This variable is proprietary. Trigger: Incremented for all session setups that failed due to an admin disconnect before the session is in a CONNECTED state. Availability: IPSec/SSL.	Int32
sess-discidletimeout	Description: Number of sessions terminated because of idle timer timeout. This variable is proprietary. Availability: IPSec/SSL.	Int32

Variables	Description	Data Type
sess-discabstimeout	Description: Number of sessions terminated because of absolute timeout. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-disclongdur	Description: Number of sessions terminated because of long duration timer timeout. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-discsesssetuptimeout	Description: Number of sessions terminated because of Session Manager session setup timeout. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-discnonexistpcrf	Description: Number of sessions terminated because of non-existence of PCRF. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-discnoresource	Description: Number of sessions terminated because of no resources. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-discauthfail	Description: Number of sessions terminated because of AAA authentication failure. This variable is proprietary. Trigger: Incremented on receiving an Access-Reject message, an invalid AAA attribute in an Access-Accept message, an AAA timeout message, a missing AAA attribute in an Access-Accept message, an invalid W-APN format, or an invalid NAI format. Also incremented in PDG mode if W-APN is not configured. Availability: IPSec/SSL.	Int32
sess-discreauthfail	Description: Number of sessions terminated because of a session re-authentication failure. This variable is proprietary. Trigger: Incremented for all AAA failures during fast re-authentication or pseudonym re-authentication. Availability: IPSec.	Int32
sess-discflowaddfail	Description: Number of sessions terminated because of flow add failure. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-discinvdestctx	Description: Number of sessions terminated because of invalid destination context. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-discsourceviol	Description: Number of sessions terminated because of source IP address violation. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-discgtp	Description: Number of sessions terminated because of a GTP failure. This variable is proprietary. Trigger: Incremented for all GTP path failures or DPC requests from the GGSN. Availability: IPSec/SSL (TTG only).	Int32

Variables	Description	Data Type
sess-attemptfaildiscgtp	Description: Number of session attempts failed because of GTP failure. This variable is proprietary. Trigger: Incremented for all session setups failed due to CPC failure/timeout. Availability: IPSec/SSL (TTG only).	Int32
sess-discdupreq	Description: Number of sessions terminated because of duplicate requests. This variable is proprietary. Trigger: Incremented on receiving a new call when a previous call exists in the CONNECTED state with the same IMSI and APN on the same Session Manager. When this occurs, the original call is cleared. Availability: IPSec/SSL (TTG only).	Int32
sess-attemptfaildiscdupreq	Description: Number of session attempts failed because of duplicate requests. This variable is proprietary. Trigger: Incremented on receiving a new call when a previous call exists in the CONNECTED state with the same IMSI and APN on the same Session Manager. When this occurs, the original call is cleared. Availability: IPSec/SSL (TTG only).	Int32
sess-discaddrfail	Description: Number of sessions terminated because of an address assignment failure. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-discmisc	Description: Number of sessions terminated because of miscellaneous reasons. This variable is proprietary. Trigger: Incremented for all SSL failures and all remaining disconnect reasons (for example, for IPSec, no-response or remote-error-notification). Availability: IPSec/SSL.	Int32
sess-attemptfaildiscmisc	Description: Number of session attempts failed because of miscellaneous reasons. This variable is proprietary. Trigger: Incremented for all session setup failures due to SSL failures (for example, handshake failures, ssl-alert, ssl-bad-message), or an unknown APN case in which the TTG is unable to resolve the APN and all remaining disconnect reasons before the call is in the CONNECTED state. Availability: IPSec/SSL.	Int32
sess-ttlbytessent	Description: Total number of bytes sent. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-ttlbytesrcvd	Description: Total number of bytes received. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-ttlpktsent	Description: Total number of packets sent. This variable is proprietary. Availability: IPSec/SSL.	Int32
sess-ttlpktrcvd	Description: Total number of packets received. This variable is proprietary. Availability: IPSec/SSL.	Int32

Variables	Description	Data Type
sess-ttlpktviolations	Description: Total number of packet violations. This variable is proprietary. Availability: IPSec/SSL.	Int32
eap-rxttlsvrpass thru	Description: Total number of EAP messages received from the EAP server in pass-through mode. This variable is proprietary. Availability: IPSec/SSL.	Int32
eap-rxsuccsvrpass thru	Description: Total number of EAP-Success messages received from the EAP server in pass-through mode. This variable is proprietary. Availability: IPSec/SSL.	Int32
eap-rxfailsvrpass thru	Description: Total number of EAP-Failure messages received from the EAP server in pass-through mode. This variable is proprietary. Availability: IPSec/SSL.	Int32
eap-rxchalsvrpass thru	Description: Total number of EAP challenge messages sent to the EAP server in pass-through mode. This variable is proprietary. Availability: IPSec/SSL.	Int32
eap-txttlsvr	Description: Total number of EAP messages transmitted to the EAP server. This variable is proprietary. Availability: IPSec/SSL.	Int32
eap-txinitrequest	Description: Total number of EAP request messages forwarded to the EAP server for initial request. This variable is proprietary. Availability: IPSec/SSL.	Int32
eap-txreqfwd	Description: Total number of EAP messages transmitted to the EAP server for forward request. This variable is proprietary. Availability: IPSec/SSL.	Int32
eap-rxmobilepassthru	Description: Total number of EAP messages transmitted to the EAP server in pass-through mode for mobile node. This variable is proprietary. Availability: IPSec/SSL.	Int32
eap-rxmobilediscarded	Description: Total number of EAP messages transmitted to the EAP server that were discarded. This variable is proprietary. Availability: IPSec/SSL.	Int32
mt-txdatabyteuplink	Description: SSL micro-tunneling: Uplink data bytes sent. This variable is proprietary. Availability: SSL.	Int64
mt-databyteuplinkdropped	Description: SSL micro-tunneling: Uplink data bytes dropped. This variable is proprietary. Availability: SSL.	Int64

Variables	Description	Data Type
mt-uldroppedd-nonconnectedstate	Description: SSL micro-tunneling: Uplink data bytes dropped due to non-connected state. This variable is proprietary. Availability: SSL.	Int64
mt-uldroppedd-transstackbuffoverflow	Description: SSL micro-tunneling: Uplink data bytes dropped due to transport stack buffer over flow. This variable is proprietary. Availability: SSL.	Int64
mt-uldroppedd-incorrectdestip	Description: SSL micro-tunneling: Uplink data bytes dropped due to incorrect destination IP address. This variable is proprietary. Availability: SSL.	Int64
mt-uldroppedd-transtackfailed	Description: SSL micro-tunneling: Uplink data bytes dropped due to transport stack failed to send. This variable is proprietary. Availability: SSL.	Int64
mt-uldroppedd-sessnotfoundforsockid	Description: SSL micro-tunneling: Uplink data bytes dropped due to session not found for sock-id. This variable is proprietary. Availability: SSL.	Int64
mt-txdatabytedownlink	Description: SSL micro-tunneling: Downlink data bytes sent. This variable is proprietary. Availability: SSL.	Int64
mt-rxttlopenreq	Description: SSL micro-tunneling: Total OPEN requests received. This variable is proprietary. Availability: SSL.	Int32
mt-rxopenreqprocessed	Description: SSL micro-tunneling: OPEN requests processed. This variable is proprietary. Availability: SSL.	Int32
mt-rxopenreqdropped	Description: SSL micro-tunneling: OPEN requests dropped. This variable is proprietary. Availability: SSL.	Int32
mt-txttlopenresp	Description: SSL micro-tunneling: Total OPEN responses sent. This variable is proprietary. Availability: SSL.	Int32
mt-txopenrespaccept	Description: SSL micro-tunneling: OPEN responses accepted. This variable is proprietary. Availability: SSL.	Int32
mt-txopenresprej	Description: SSL micro-tunneling: OPEN responses rejected. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-rxopenresp	Description: SSL micro-tunneling: OPEN responses received. This variable is proprietary. Availability: SSL.	Int32
mt-rxttlnamreq	Description: SSL micro-tunneling: Total NAM requests received. This variable is proprietary. Availability: SSL.	Int32
mt-rxnamreqprocessed	Description: SSL micro-tunneling: NAM requests processed. This variable is proprietary. Availability: SSL.	Int32
mt-rxnamreqdropped	Description: SSL micro-tunneling: NAM requests dropped. This variable is proprietary. Availability: SSL.	Int32
mt-txttlnamresp	Description: SSL micro-tunneling: Total NAM responses sent. This variable is proprietary. Availability: SSL.	Int32
mt-txnamrespaccept	Description: SSL micro-tunneling: NAM responses accepted. This variable is proprietary. Availability: SSL.	Int32
mt-txnamresprej	Description: SSL micro-tunneling: NAM responses rejected. This variable is proprietary. Availability: SSL.	Int32
mt-rxnamresp	Description: SSL micro-tunneling: NAM responses received. This variable is proprietary. Availability: SSL.	Int32
mt-rxttlauthreq	Description: SSL micro-tunneling: Total AUTH requests received. This variable is proprietary. Availability: SSL.	Int32
mt-rxauthreqprocessed	Description: SSL micro-tunneling: AUTH requests processed. This variable is proprietary. Availability: SSL.	Int32
mt-rxauthreqdropped	Description: SSL micro-tunneling: AUTH requests dropped. This variable is proprietary. Availability: SSL.	Int32
mt-txttlauthresp	Description: SSL micro-tunneling: Total AUTH responses sent. This variable is proprietary. Availability: SSL.	Int32
mt-txauthrespaccept	Description: SSL micro-tunneling: AUTH responses accepted. This variable is proprietary. Availability: SSL.	Int32
mt-txauthresprej	Description: SSL micro-tunneling: AUTH responses rejected. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-rxauthresp	Description: SSL micro-tunneling: AUTH responses received. This variable is proprietary. Availability: SSL.	Int32
mt-rxttlrecvreq	Description: SSL micro-tunneling: Total RECV requests received. This variable is proprietary. Availability: SSL.	Int32
mt-rxrecvreqprocessed	Description: SSL micro-tunneling: RECV requests processed. This variable is proprietary. Availability: SSL.	Int32
mt-rxrecvreqdropped	Description: SSL micro-tunneling: RECV requests dropped. This variable is proprietary. Availability: SSL.	Int32
mt-txttlrecvresp	Description: SSL micro-tunneling: Total RECV responses sent. This variable is proprietary. Availability: SSL.	Int32
mt-txrecvrespaccept	Description: SSL micro-tunneling: RECV responses accepted. This variable is proprietary. Availability: SSL.	Int32
mt-txrecvresprej	Description: SSL micro-tunneling: RECV responses rejected. This variable is proprietary. Availability: SSL.	Int32
mt-rxrecvresp	Description: SSL micro-tunneling: RECV responses received. This variable is proprietary. Availability: SSL.	Int32
mt-rxttlclosereq	Description: SSL micro-tunneling: Total CLOSE requests received. This variable is proprietary. Availability: SSL.	Int32
mt-rxclosereqprocessed	Description: SSL micro-tunneling: CLOSE requests processed. This variable is proprietary. Availability: SSL.	Int32
mt-rxclosereqdropped	Description: SSL micro-tunneling: CLOSE requests dropped. This variable is proprietary. Availability: SSL.	Int32
mt-txttlclosereq	Description: SSL micro-tunneling: Total CLOSE requests sent. This variable is proprietary. Availability: SSL.	Int32
mt-txclosereqdispatch	Description: SSL micro-tunneling: CLOSE requests dispatched. This variable is proprietary. Availability: SSL.	Int32
mt-rxttlclosereq	Description: SSL micro-tunneling: Total CLOSE responses received. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-rxcloserespacept	Description: SSL micro-tunneling: CLOSE responses accepted. This variable is proprietary. Availability: SSL.	Int32
mt-rxcloseresprej	Description: SSL micro-tunneling: CLOSE responses rejected. This variable is proprietary. Availability: SSL.	Int32
mt-rxcloserespdropped	Description: SSL micro-tunneling: CLOSE responses dropped. This variable is proprietary. Availability: SSL.	Int32
mt-txttlcloseresp	Description: SSL micro-tunneling: Total CLOSE responses sent. This variable is proprietary. Availability: SSL.	Int32
mt-txcloserespacept	Description: SSL micro-tunneling: CLOSE responses accepted. This variable is proprietary. Availability: SSL.	Int32
mt-txcloseresprej	Description: SSL micro-tunneling: CLOSE responses rejected. This variable is proprietary. Availability: SSL.	Int32
mt-rxttlsendreq	Description: SSL micro-tunneling: Total SEND requests received. This variable is proprietary. Availability: SSL.	Int32
mt-rxsendreqprocessed	Description: SSL micro-tunneling: SEND requests processed. This variable is proprietary. Availability: SSL.	Int32
mt-rxsendreqdropped	Description: SSL micro-tunneling: SEND requests dropped. This variable is proprietary. Availability: SSL.	Int32
mt-txttlsendreq	Description: SSL micro-tunneling: Total SEND requests sent. This variable is proprietary. Availability: SSL.	Int32
mt-txsendreqdispatch	Description: SSL micro-tunneling: SEND requests dispatched. This variable is proprietary. Availability: SSL.	Int32
mt-rxttlsendresp	Description: SSL micro-tunneling: Total SEND responses received. This variable is proprietary. Availability: SSL.	Int32
mt-rxsendrespacept	Description: SSL micro-tunneling: SEND responses accepted. This variable is proprietary. Availability: SSL.	Int32
mt-rxsendresprej	Description: SSL micro-tunneling: SEND responses rejected. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-rxsendrespdropped	Description: SSL micro-tunneling: SEND responses dropped. This variable is proprietary. Availability: SSL.	Int32
mt-txttlsendresp	Description: SSL micro-tunneling: Total SEND responses sent. This variable is proprietary. Availability: SSL.	Int32
mt-txsendrespacept	Description: SSL micro-tunneling: SEND responses accepted. This variable is proprietary. Availability: SSL.	Int32
mt-txsendresprej	Description: SSL micro-tunneling: SEND responses rejected. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-cannotcreatconn	Description: SSL micro-tunneling: OPEN Reject sent: cannot create connection. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-protonotsupported	Description: SSL micro-tunneling: OPEN Reject sent: protocol not supported. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-permdenied	Description: SSL micro-tunneling: OPEN Reject sent: permission denied. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-cannotcreatesockid	Description: SSL micro-tunneling: OPEN Reject sent: cannot create sock-id. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-badparam	Description: SSL micro-tunneling: OPEN Reject sent: bad parameters. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-addrport-alreadyused	Description: SSL micro-tunneling: OPEN Reject sent: address or port already used. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-cannotconnectserver	Description: SSL micro-tunneling: OPEN Reject sent: cannot connect the server. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-hostnameunknown	Description: SSL micro-tunneling: OPEN Reject sent: hostname is unknown. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-authrequired	Description: SSL micro-tunneling: OPEN Reject sent: authentication required. This variable is proprietary. Availability: SSL.	Int32
mt-openrejtx-undefined	Description: SSL micro-tunneling: OPEN Reject sent: undefined. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-openrejtx-reserved	Description: SSL micro-tunneling: OPEN Reject sent: reserved. This variable is proprietary. Availability: SSL.	Int32
mt-namrejtx-versionnotsupported	Description: SSL micro-tunneling: OPEN Reject sent: version not supported. This variable is proprietary. Availability: SSL.	Int32
mt-namrejtx-servercannotcreateauth	Description: SSL micro-tunneling: OPEN Reject sent: server cannot create an authentication process. This variable is proprietary. Availability: SSL.	Int32
mt-namrejtx-badparameters	Description: SSL micro-tunneling: OPEN Reject sent: bad parameters. This variable is proprietary. Availability: SSL.	Int32
mt-namrejtx-undefined	Description: SSL micro-tunneling: NAM Reject sent: undefined. This variable is proprietary. Availability: SSL.	Int32
mt-namrejtx-reserved	Description: SSL micro-tunneling: NAM Reject sent: reserved. This variable is proprietary. Availability: SSL.	Int32
mt-authrejtx-authidunknown	Description: SSL micro-tunneling: AUTH Reject sent: the auth-id is unknown. This variable is proprietary. Availability: SSL.	Int32
mt-authrejtx-cannotconnntoauthserver	Description: SSL micro-tunneling: AUTH Reject sent: cannot connect to authentication server. This variable is proprietary. Availability: SSL.	Int32
mt-authrejtx-badparam	Description: SSL micro-tunneling: AUTH Reject sent: bad parameters. This variable is proprietary. Availability: SSL.	Int32
mt-authrejtx-undefined	Description: SSL micro-tunneling: AUTH Reject sent: undefined. This variable is proprietary. Availability: SSL.	Int32
mt-authrejtx-reserved	Description: SSL micro-tunneling: AUTH Reject sent: reserved. This variable is proprietary. Availability: SSL.	Int32
mt-recvrejtx-sockidunknown	Description: SSL micro-tunneling: RECV Reject sent: the sock-id is unknown. This variable is proprietary. Availability: SSL.	Int32
mt-recvrejtx-connlost	Description: SSL micro-tunneling: RECV Reject sent: the connection is lost. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-recvreject-permissiondenied	Description: SSL micro-tunneling: RECV Reject sent: permission denied. This variable is proprietary. Availability: SSL.	Int32
mt-recvreject-badparameters	Description: SSL micro-tunneling: RECV Reject sent: bad parameters. This variable is proprietary. Availability: SSL.	Int32
mt-recvreject-undefined	Description: SSL micro-tunneling: RECV Reject sent: undefined. This variable is proprietary. Availability: SSL.	Int32
mt-recvreject-unreserved	Description: SSL micro-tunneling: RECV Reject sent: reserved. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-sockidunknown	Description: SSL micro-tunneling: RECV Reject sent: the sock-id is unknown. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-connlost	Description: SSL micro-tunneling: CLOSE Reject sent: the connection is lost. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-badparameters	Description: SSL micro-tunneling: CLOSE Reject sent: the bad parameters. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-undefined	Description: SSL micro-tunneling: CLOSE Reject sent: undefined. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-unreserved	Description: SSL micro-tunneling: CLOSE Reject sent: reserved. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-sockidunknown	Description: SSL micro-tunneling: CLOSE Reject received: sock-id unknown. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-connlost	Description: SSL micro-tunneling: CLOSE Reject received: the connection is lost. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-badparameters	Description: SSL micro-tunneling: CLOSE Reject received: bad parameters. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-undefined	Description: SSL micro-tunneling: CLOSE Reject received: undefined. This variable is proprietary. Availability: SSL.	Int32
mt-closereject-unreserved	Description: SSL micro-tunneling: CLOSE Reject received: reserved. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-sendrejtx-sockidunknown	Description: SSL micro-tunneling: SEND Reject sent: sock-id unknown. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejtx-connlost	Description: SSL micro-tunneling: SEND Reject sent: the connection is lost. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejtx-permissiondenied	Description: SSL micro-tunneling: SEND Reject sent: permission denied. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejtx-badparam	Description: SSL micro-tunneling: SEND Reject sent: bad parameters. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejtx-undefined	Description: SSL micro-tunneling: SEND Reject sent: undefined. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejtx-reserved	Description: SSL micro-tunneling: SEND Reject sent: reserved. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejrx-sockidunknown	Description: SSL micro-tunneling: SEND Reject received: sock-id unknown. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejrx-connlost	Description: SSL micro-tunneling: SEND Reject received: connection is lost. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejrx-permissiondenied	Description: SSL micro-tunneling: SEND Reject received: permission denied. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejrx-badparam	Description: SSL micro-tunneling: SEND Reject received: bad parameters. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejrx-undefined	Description: SSL micro-tunneling: SEND Reject received: undefined. This variable is proprietary. Availability: SSL.	Int32
mt-sendrejrx-reserved	Description: SSL micro-tunneling: SEND Reject received: reserved. This variable is proprietary. Availability: SSL.	Int32
mt-pktdiscardstat-unknownversion	Description: SSL micro-tunneling: Packets discarded statistics: unknown version. This variable is proprietary. Availability: SSL.	Int32
mt-pktdiscardstat-unknownmsgtype	Description: SSL micro-tunneling: Packets discarded statistics: unknown message type. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-msgdenied-open-decodefaildropped	Description: SSL micro-tunneling: Packets discarded statistics: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-open-decodefailrej	Description: SSL micro-tunneling: Packets discarded statistics: decoding failed, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-open-unknownctxtdropped	Description: SSL micro-tunneling: Messages denied statistics: OPEN: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-open-unknownctxtrej	Description: SSL micro-tunneling: Messages denied statistics: OPEN: decoding failed, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-respopen-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: RESP OPEN: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-respopen-unknownctxtdropped	Description: SSL micro-tunneling: Messages denied statistics: RESP OPEN: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-close-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: CLOSE: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-close-decodefailrej	Description: SSL micro-tunneling: Messages denied statistics: CLOSE: decoding failed, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-close-unknownctxtdropped	Description: SSL micro-tunneling: Messages denied statistics: CLOSE: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-close-unknownctxtrej	Description: SSL micro-tunneling: Messages denied statistics: CLOSE: unknown context, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-respclose-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: RESP CLOSE: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-msgdenied-respclose-unknownctxdropped	Description: SSL micro-tunneling: Messages denied statistics: RESP CLOSE: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-nam-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: NAM: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-nam-decodefailrej	Description: SSL micro-tunneling: Messages denied statistics: NAM: decoding failed, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-nam-unknownctxdropped	Description: SSL micro-tunneling: Messages denied statistics: NAM: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-nam-unknownctxrej	Description: SSL micro-tunneling: Messages denied statistics: NAM: unknown context, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-respnam-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: RESP NAM: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-respnam-unknownctxdropped	Description: SSL micro-tunneling: Messages denied statistics: RESP NAM: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-auth-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: AUTH: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-auth-decodefailrej	Description: SSL micro-tunneling: Messages denied statistics: AUTH: decoding failed, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-auth-unknownctxdropped	Description: SSL micro-tunneling: Messages denied statistics: AUTH: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-auth-unknownctxrej	Description: SSL micro-tunneling: Messages denied statistics: AUTH: unknown context, rejected. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-msgdenied-respauth-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: RESP AUTH: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-respauth-unknownctxdropped	Description: SSL micro-tunneling: Messages denied statistics: RESP AUTH: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-recv-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: RECV: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-recv-decodefailrej	Description: SSL micro-tunneling: Messages denied statistics: RECV: decoding failed, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-recv-unknownctxdropped	Description: SSL micro-tunneling: Messages denied statistics: RECV: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-recv-unknownctxrej	Description: SSL micro-tunneling: Messages denied statistics: RECV: unknown context, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-resprecv-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: RESP RECV: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-resprecv-unknownctxdropped	Description: SSL micro-tunneling: Messages denied statistics: RESP RECV: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-send-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: SEND: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-send-decodefailrej	Description: SSL micro-tunneling: Messages denied statistics: SEND: decoding failed, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-send-unknownctxdropped	Description: SSL micro-tunneling: Messages denied statistics: SEND: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32

Variables	Description	Data Type
mt-msgdenied-send-unknownctxrej	Description: SSL micro-tunneling: Messages denied statistics: SEND: unknown context, rejected. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-respsend-decodefaildropped	Description: SSL micro-tunneling: Messages denied statistics: RESP SEND: decoding failed, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-respsend-unknownctxdropped	Description: SSL micro-tunneling: Messages denied statistics: RESP SEND: unknown context, dropped. This variable is proprietary. Availability: SSL.	Int32
mt-msgdenied-respunknowncommdropped	Description: SSL micro-tunneling: Messages denied statistics: RESP to unknown command dropped. This variable is proprietary. Availability: SSL.	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 52

PDIF Schema Statistics

The PDIF schema provides operational statistics that can be used for monitoring and troubleshooting the following products: PDIF

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 52. Bulk Statistic Variables in the PDIF Schema

Variables	Description	Data Type
vpnname	Description: The name of the context currently facilitating the service processing the subscriber session. This is a key variable.	String

Variables	Description	Data Type
vpnid	Description: The identification number of the context currently facilitating the service processing the subscriber session. This is an internal reference number. This is a key variable.	Int32
svcname	Description: The service name for which PDIF statistics are being displayed. This is a key variable.	String
svcid	Description: The service ID for which PDIF statistics are being displayed. This is a key variable.	Int32
bindaddress	Description: The bind IP address for this PDIF service.	String
state	Description: System-wide PDIF state identified by the following codes: - unknown(0) - inservice(1): At least one PDIF service is available. - outofservice(2): No PDIF service is currently active, but one or more PDIF services are configured.	Int32
sess-curinprog	Description: Number of PDIF service sessions in progress (including transient ones).	Int32
sess-curact	Description: Number of currently active PDIF sessions.	Int32
sess-curdorm	Description: Number of currently dormant PDIF sessions.	Int32
sess-curactipv4	Description: Number of currently active IPV4 sessions.	Int32
sess-cursip	Description: Number of current simple IP sessions.	Int32
sess-curmip	Description: Number of current mobile IP sessions.	Int32
sess-curmpip	Description: Number of current proxy mobile IP sessions.	Int32
sess-sipattempt	Description: Number of attempted simple IP sessions.	Int32
sess-sipsuccess	Description: Number of successful simple IP sessions.	Int32
sess-sipfail	Description: Number of failed simple IP sessions.	Int32
sess-mipattempt	Description: Number of attempted mobile IP sessions.	Int32
sess-mipsuccess	Description: Number of successful mobile IP sessions.	Int32
sess-mipfail	Description: Number of failed mobile IP sessions.	Int32
sess-pmipattempt	Description: Number of attempted proxy mobile IP sessions.	Int32
sess-pmipsuccess	Description: Number of successful proxy mobile IP sessions completed.	Int32
sess-pmipfail	Description: Number of failed proxy mobile IP sessions.	Int32
sess-sipfbasucc	Description: Number of successful simple IP fallback sessions.	Int32
sess-sipfbasnotdone	Description: Number of sessions where simple IP fallback was not done.	Int32
sess-sipfbasnorrq	Description: Number of simple IP fallback sessions with no rrq request.	Int32
sess-sipfbasnotallw	Description: Number of simple IP fallback sessions that were not allowed.	Int32

Variables	Description	Data Type
sess-sipfbactagaddr	Description: Number of simple IP fallback sessions that failed because of no tagged pool address.	Int32
sess-sipfbactmisc	Description: Number of simple IP fallback sessions that failed because of miscellaneous reasons.	Int32
sess-ttlsetup	Description: Total number of session setups.	Int32
sess-ttlattempt	Description: Total number of session attempts.	Int32
sess-ttlattemptfail	Description: Total number of session attempts that failed.	Int32
sess-ttlrel	Description: Total number of sessions released.	Int32
sess-ttlrellocal	Description: Total number of sessions released locally.	Int32
sess-ttlrelremote	Description: Total number of sessions released remotely.	Int32
sess-ttlsip	Description: Total Number of simple IP sessions.	Int32
sess-ttlmip	Description: Total number of mobile IP sessions.	Int32
sess-ttl-pmip	Description: Total number of proxy mobile IP sessions.	Int32
sess-discbeforeconn	Description: Number of sessions disconnected by remote node before being connected.	Int32
sess-discipsec	Description: Number of sessions terminated via IPsec, either by the remote node or an error in the IKE tunnel set up process.	Int32
discadmin	Description: Number of sessions terminated because of admin release.	Int32
sess-discidle timeout	Description: Number of sessions terminated because of idle timer timeout. Idle means that there is no activity from the user side.	Int32
sess-discabstimeout	Description: Number of sessions terminated because of absolute timeout, which is the maximum time allowed for the session.	Int32
sess-disc longdur	Description: Number of sessions terminated because of long duration timer timeout, which is the maximum time a session can be up, if the absolute timeout is not configured.	Int32
sess-discmmdtimeout	Description: Number of sessions terminated because of multimedia domain service timer expiry.	Int32
sess-distysettup timeout	Description: Number of sessions terminated because of TY interface setup timeout.	Int32
sess-discsesssettup timeout	Description: Number of sessions terminated because of Session Manager session setup timeout.	Int32
sess-discnonexistpcrf	Description: Number of sessions terminated because of non-existence of PCRF.	Int32
sess-discnoresource	Description: Number of sessions terminated because of no resources. Number of sessions terminated because of no resources. This can be from lack of memory or CPU resources, NPU-based flows, a session limit based on the license, etc.	Int32
sess-discauthfail	Description: Number of sessions terminated because of AAA authentication failure.	Int32
sess-discflowaddfail	Description: Number of sessions terminated because of flow add failure.	Int32

Variables	Description	Data Type
sess-discinvdestctx	Description: Number of sessions terminated because of an invalid destination context, when the destination context for the subscriber is not found or is not defined.	Int32
sess-discsourceviol	Description: Number of sessions terminated because of source IP address violation.	Int32
sess-discmipremote	Description: Number of sessions terminated because of remote mobile IP.	Int32
sess-discmiplocal	Description: Number of sessions terminated because of local mobile IP.	Int32
sess-discdupreq	Description: Number of sessions terminated because of a duplicated request.	Int32
sess-discmacfail	Description: Number of sessions terminated because of a MAC address authentication failure.	Int32
sess-discaddrfail	Description: Number of sessions terminated because of an address allocation failure.	Int32
sess-discmisc	Description: Number of sessions terminated for miscellaneous reasons, which is disconnection for any reason other than the reasons defined above.	Int32
sess-remaining	Description: Number of available sessions remaining, based on the configured maximum sessions.	Int32
sess-limit	Description: The maximum sessions allowed. This is the value configured along with the bind command or it can be the system default.	Int32
mac-authreq	Description: Number of MAC address authentication requests.	Int32
mac-authreqvalid	Description: Number of valid MAC address authentication requests.	Int32
mac-authreqinv	Description: Number of invalid MAC address authentication requests.	Int32
mac-authsucc	Description: Number of MAC address validation successes.	Int32
mac-authsuccmatch	Description: Number of successful MAC address matches.	Int32
mac-authsucchssfai	Description: Number of HSS server authentication failures.	Int32
mac-authfail	Description: Number of MAC address authentication failures because of an unauthorized MAC address.	Int32
mac-authfaildiam	Description: Number of MAC address authentication failures because of a Diameter error.	Int32
mac-authfailuserunk	Description: Number of MAC address authentication failures because of an unknown user.	Int32
mac-authfailmacnotfound	Description: Number of MAC address authentication failures because the MAC address was not found. The MAC address is received as part of the NAI.	Int32
mac-authfailmacmissing	Description: Number of MAC address authentication failures because the MAC address was missing. The MAC address is received as part of the NAI.	Int32
mac-authfailmacmalformed	Description: Number of MAC address authentication failures because the MAC address was malformed. The MAC address is received as part of the NAI.	Int32
mac-authfailnosh	Description: Number of MAC address authentication failures because the Sh interface is down.	Int32
mac-authfailtimeout	Description: Number of MAC address authentication failures because of a timeout, which is a session setup time out with a required MAC validation, but MAC validation not complete.	Int32

Variables	Description	Data Type
mac-authfailother	Description: Number of MAC address authentication failures because of any reason other than mentioned above.	Int32
eap-rxttlsrvrpass thru	Description: Total number of EAP messages received from the EAP server in pass-through mode.	Int32
eap-rxchalsrvrpass thru	Description: Total number of EAP challenge messages sent to the EAP server in pass-through mode.	Int32
eap-rxsuccsrvrpass thru	Description: Total number of EAP-Success messages received from the EAP server in pass-through mode.	Int32
eap-rxfailsrvrpass thru	Description: Total number of EAP-Failure messages received from the EAP server in pass-through mode.	Int32
eap-rxmobilepass thru	Description: Total number of EAP messages received from mobile clients in pass-through mode.	Int32
eap-txttlsrvrpass thru	Description: Total number of EAP messages transmitted to the EAP server in pass-through mode.	Int32
eap-txinitsrvrpass thru	Description: Total number of EAP messages transmitted to the EAP server in pass-through mode for initial request.	Int32
eap-txfwdreqsrvrpass thru	Description: Total number of EAP messages transmitted to the EAP server in pass-through mode for forward request.	Int32
ipsec-txpacket	Description: Number of IPsec packets transmitted.	Int64
ipsec-txoctet	Description: Number of IPsec bytes transmitted.	Int64
ipsec-rxpacket	Description: Number of IPsec packets received.	Int64
ipsec-rxoctet	Description: Number of IPsec bytes received.	Int64
ipsec-violpacket	Description: Number of data packets that do not match any of the configured traffic selectors.	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 53

P-GW Node Level Schema Statistics

The P-GW schema provides operational statistics that can be used for monitoring and troubleshooting the following products: P-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 53. Bulk Statistic Variables in the P-GW Service Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the P-GW service. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the P-GW service. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	Displays the name of the P-GW service for which the statistics are displayed. This is a key variable. Type: Information	String
servid	The identification number of the service configured on the system that is currently facilitating the P-GW service. This is an internal reference number. This is a key variable. Type: Information	Int32
sess-cur	The total number of sessions currently established on this system. Type: Gauge	Int32
sessstat-bearact-def	Session Statistics - Total default bearers active Type: Gauge	Int32
sessstat-bearact-ded	Session Statistics - Total dedicated bearers active Type: Gauge	Int32
sessstat-bearact-ue-init-ded	Session Statistics - Total bearers active - UE-initiated Type: Gauge	Int32
sessstat-bearact-nw-init-ded	Session Statistics - Total bearers active - Network-initiated Type: Gauge	Int32
sessstat-bearact-nw-init-ded-att	Session Statistics - Total bearers active - Network-initiated dedicated bearers Type: Gauge	Int32
sessstat-bearsetup-def	Session Statistics - Total default bearers setup Type: Counter	Int32
sessstat-bearsetup-ded	Session Statistics - Total dedicated bearers setup Type: Counter	Int32
sessstat-bearsetup-ue-init-ded	Session Statistics - Total bearers rejected - Network-req reject - No Resource Type: Counter	Int32
sessstat-bearsetup-nw-init-ded	Session Statistics - Total bearers setup - Dedicated bearers - Network-initiated Type: Counter	Int32
sessstat-bearrel-def	Session Statistics - Total default bearers released Type: Counter	Int32
sessstat-bearrel-ded	Session Statistics - Total dedicated bearers released Type: Counter	Int32
sessstat-bearrel-nwdefadmin	Session Statistics - Total bearers released - Network Default Admin disconnect Type: Counter	Int32
sessstat-bearrel-nwdefgtp	Session Statistics - Total bearers released - Network Default GTP-U error ind Type: Counter	Int32

Variables	Description	Data Type
sessstat-bearrel-nwdefsgw	Session Statistics - Total bearers released - Network Default S-GW Path failure Type: Counter	Int32
sessstat-bearrel-nwdefmme	Session Statistics - Total bearers released - Network Default MME initiated release Trigger: When a PDN session is released by MME (4G), this counter is incremented. Type: Counter	Int32
sessstat-bearrel-nwdedadmin	Session Statistics - Total bearers released - Network Dedicated Admin disconnect Type: Counter	Int32
sessstat-bearrel-nwdedgtp	Session Statistics - Total bearers released - Network Dedicated GTP-U error ind Type: Counter	Int32
sessstat-bearrel-nwdedmme	Session Statistics - Total bearers released - Network Dedicated MME initiated release Type: Counter	Int32
sessstat-bearrel-nwdeddefbear	Session Statistics - Total bearers released - Network Dedicated Default bearer release Type: Counter	Int32
sessstat-bearrel-nwdedgxdisc	Session Statistics - Total bearers released - Network Dedicated GX Disconnect Type: Counter	Int32
sessstat-bearrelfail-def	Session Statistics - Total bearers release failure - Default bearers Type: Counter	Int32
sessstat-bearrelfail-ded	Session Statistics - Total bearers release failure - Dedicated bearers Type: Counter	Int32
sessstat-bearrej-def	Session Statistics - Total bearers rejected - Default bearers Type: Counter	Int32
sessstat-bearrej-ded	Session Statistics - Total bearers rejected - Dedicated bearers Type: Counter	Int32
sessstat-bearrej-nores	Session Statistics - Total bearers rejected - No Resource Type: Counter	Int32
sessstat-bearrej-uereq	Session Statistics - Total bearers rejected - UE-req reject Type: Counter	Int32
sessstat-bearrej-uereq-nores	Session Statistics - Total bearers rejected - UE-req reject - No Resource Type: Counter	Int32
sessstat-bearrej-misapn	Session Statistics - Total bearers rejected - Missing or unknown APN Type: Counter	Int32
sessstat-bearrej-nwreq	Session Statistics - Total bearers rejected - Network-req reject Type: Counter	Int32
sessstat-bearrej-nwreq-nores	Session Statistics - Total bearers rejected - Network-req reject - No Resource Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
sessstat-bearrej-nwreq-nomem	Session Statistics - Total bearers rejected - Network-req reject - No memory available Type: Counter	Int32
sessstat-bearrej-nwreq-sysfail	Session Statistics - Total bearers rejected - Network-req reject - System failure Type: Counter	Int32
sessstat-bearrej-apnmode	Session Statistics - Total bearers rejected - APN selection -Mode mismatch Type: Counter	Int32
sessstat-bearrej-pdn	Session Statistics - Total bearers rejected - Pref PDN -Type not supported Type: Counter	Int32
sessstat-bearrej-apnrestr	Session Statistics - Total bearers rejected - APN restr violation Type: Counter	Int32
sessstat-bearrej-subauth	Session Statistics - Total bearers rejected - Subs auth failed Type: Counter	Int32
sessstat-bearrej-subsdnnotallow	Session Statistics - Total bearers rejected - Subscriber's static address not allowed Type: Counter	Int32
sessstat-bearrej-subsdnnotalloc	Session Statistics - Total bearers rejected - Subscriber's static address not allocated Type: Counter	Int32
sessstat-bearrej-dynaddrnotalloc	Session Statistics - Total bearers rejected - Dynamic address not allocated Type: Counter	Int32
sessstat-bearrej-subsdnnotpres	Session Statistics - Total bearers rejected - Subscriber's static address not present Type: Counter	Int32
sessstat-bearmod-ueinit	Session Statistics - Total bearers modified - UE-initiated modification Type: Counter	Int32
sessstat-bearmod-nwinit	Session Statistics - Total bearers modified - Network-initiated modification Type: Counter	Int32
sessstat-bearmod-ueqos	Session Statistics - Total bearers modified - UE-initiated quality of service (QoS) modification Type: Counter	Int32
sessstat-bearmod-uetft	Session Statistics - Total bearers modified - UE-initiated TFT modification Type: Counter	Int32
sessstat-bearmod-nwqos	Session Statistics - Total bearers modified - Network-initiated QoS modification Type: Counter	Int32
sessstat-bearmod-nwtft	Session Statistics - Total bearers modified - Network-initiated TFT modification Type: Counter	Int32
sessstat-bearmodfail-ueinit	Session Statistics - Total bearers modification failure - UE-initiated modification failed Type: Counter	Int32

Variables	Description	Data Type
sessstat-bearmodfail-nwinit	Session Statistics - Total bearers modification failure - Network-initiated modification failed Type: Counter	Int32
sessstat-bearmodfail-uenores	Session Statistics - Total bearers modification failure - UE-initiated No res available Type: Counter	Int32
sessstat-bearmodfail-uesemtft	Session Statistics - Total bearers modification failure - UE-initiated Semantic error in TFT oper Type: Counter	Int32
sessstat-bearmodfail-uesyntft	Session Statistics - Total bearers modification failure - UE-initiated Syntax error in TFT oper Type: Counter	Int32
sessstat-bearmodfail-uesempkt	Session Statistics - Total bearers modification failure - UE-initiated Semantic error in packet filter Type: Counter	Int32
sessstat-bearmodfail-uesynpkt	Session Statistics - Total bearers modification failure - UE-initiated syntax error in packet filter Type: Counter	Int32
sessstat-bearmodfail-nwnores	Session Statistics - Total bearers modification failure - Network-initiated - No res available Type: Counter	Int32
sessstat-bearmodfail-nwnomem	Session Statistics - Total bearers modification failure - Network-initiated - No memory available Type: Counter	Int32
sessstat-bearmodfail-nwsysfail	Session Statistics - Total bearers modification failure - Network-initiated - System failure Type: Counter	Int32
sessstat-bearmodfail-nwsemtft	Session Statistics - Total bearers modification failure - Network-initiated Semantic error in TFT oper Type: Counter	Int32
sessstat-bearmodfail-nwsyntft	Session Statistics - Total bearers modification failure - Network-initiated syntax error in TFT oper Type: Counter	Int32
sessstat-bearmodfail-nwsempkt	Session Statistics - Total bearers modification failure - Network-initiated Semantic error in packet filter Type: Counter	Int32
sessstat-bearmodfail-nwsynpkt	Session Statistics - Total bearers modification failure - Network-initiated syntax error in packet filter Type: Counter	Int32
sessstat-bearmodfail-qos-uenores	Session Statistics - Total bearer modification failures - User equipment quality of service no response errors Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
sessstat-bearmodfail-qos-uesemtft	Session Statistics - Total bearer modification failures - User equipment quality of service TFT semantics errors Type: Counter	Int32
sessstat-bearmodfail-qos-uesyntft	Session Statistics - Total bearer modification failures - User equipment quality of service TFT syntax errors Type: Counter	Int32
sessstat-bearmodfail-qos-uesempkt	Session Statistics - Total bearer modification failures - User equipment quality of service packet semantics errors Type: Counter	Int32
sessstat-bearmodfail-qos-uesynpkt	Session Statistics - Total bearer modification failures - User equipment quality of service packet syntax errors Type: Counter	Int32
sessstat-bearmodfail-qos-nwnores	Session Statistics - Total bearer modification failures - Network-initiated quality of service no response Type: Counter	Int32
sessstat-bearmodfail-qos-nwnomem	Session Statistics - Total bearer modification failures - Network-initiated quality of service no memory Type: Counter	Int32
sessstat-bearmodfail-qos-nwsysfail	Session Statistics - Total bearer modification failures - Network-initiated quality of service system failures Type: Counter	Int32
sessstat-bearmodfail-qos-nwsemtft	Session Statistics - Total bearer modification failures - Network-initiated quality of service semantics of TFT Type: Counter	Int32
sessstat-bearmodfail-qos-nwsyntft	Session Statistics - Total modified bearer failures - Network-initiated TFT syntax Type: Counter	Int32
sessstat-bearmodfail-qos-nwsempkt	Session Statistics - Total modified bearer failures - Network quality of service semantics packets Type: Counter	Int32
sessstat-bearmodfail-qos-nwsynpkt	Session Statistics - Total modified bearer failures - Network quality of service syntax of packets Type: Counter	Int32
sessstat-beardel-ded	Session Statistics - Total deleted dedicated bearers Type: Counter	Int32
sessstat-nw-init-qos-update-att	Session Statistics - Total bearers modified - Network initiated - quality of service (QoS) modifications attempted Type: Counter	Int32
sessstat-nw-init-no-qos-update-att	Session Statistics - Total bearers modified - Network initiated - no quality of service (QoS) modifications attempted Type: Counter	Int32

Variables	Description	Data Type
sessstat-nw-init-bearer-fail-cause	Session Statistics - Total bearers modification failure - Network-initiated Syntax error in packet filter Type: Counter	Int32
sessstat-pdn-ipv4active	Session Statistics - Total PDN-Type Statistics - IPv4 Active Type: Gauge	Int32
sessstat-pdn-ipv4setup	Session Statistics - Total PDN-Type Statistics - IPv4 Setup Type: Counter	Int32
sessstat-pdn-ipv4rel	Session Statistics - Total PDN-Type Statistics - IPv4 Released Type: Counter	Int32
sessstat-pdn-ipv6active	Session Statistics - Total PDN-Type Statistics - IPv6 Active Type: Gauge	Int32
sessstat-pdn-ipv6setup	Session Statistics - Total PDN-Type Statistics - IPv6 Setup Type: Counter	Int32
sessstat-pdn-ipv6rel	Session Statistics - Total PDN-Type Statistics - IPv6 Released Type: Counter	Int32
sessstat-pdn-ipv4v6active	Session Statistics - Total PDN-Type Statistics - IPv4v6 Active Type: Gauge	Int32
sessstat-pdn-ipv4v6setup	Session Statistics - Total PDN-Type Statistics - IPv4v6 Setup Type: Counter	Int32
sessstat-pdn-ipv4v6rel	Session Statistics - Total PDN-Type Statistics - IPv4v6 Released Type: Counter	Int32
sessstat-ipv4addaloc	Session Statistics - IPv4 address allocation Type: Counter	Int32
sessstat-ipaddaloc-ipv4loacalpool	Session Statistics - IP address allocation Statistics - IPv4 Local pool address assign Type: Counter	Int32
sessstat-ipaddaloc-ipv4staticaddr	Session Statistics - IP address allocation Statistics - IPv4 Static address assign Type: Counter	Int32
sessstat-ipaddaloc-ipv4radaddr	Session Statistics - IP address allocation Statistics - IPv4 Radius provided address assign Type: Counter	Int32
sessstat-ipv6addaloc	Session Statistics - IPv6 address allocation Type: Counter	Int32
sessstat-ipaddaloc-ipv6auto	Session Statistics - IP address allocation Statistics - IPv6 Stateless auto config Type: Counter	Int32
subplmnstat-homesubact	Subscriber PLMN Statistics - Home subscribers sessions active Type: Gauge	Int32
subplmnstat-homesubsetup	Subscriber PLMN Statistics - Home subscribers sessions setup Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
subplmnstat-homesubrel	Subscriber PLMN Statistics - Home subscribers sessions released Type: Counter	Int32
subplmnstat-roamsubact	Subscriber PLMN Statistics - Roaming subscribers sessions active Type: Gauge	Int32
subplmnstat-roamsubsetup	Subscriber PLMN Statistics - Roaming subscribers sessions setup Type: Counter	Int32
subplmnstat-roamsubrel	Subscriber PLMN Statistics - Roaming subscribers sessions released Type: Counter	Int32
subplmnstat-visitsubact	Subscriber PLMN Statistics - Visiting subscribers sessions active Type: Gauge	Int32
subplmnstat-visitsubsetup	Subscriber PLMN Statistics - Visiting subscribers sessions setup Type: Counter	Int32
subplmnstat-visitsubrel	Subscriber PLMN Statistics - Visiting subscribers sessions released Type: Counter	Int32
sgitunstat-ipv4sessact	SGi tunneling Statistics - IPv4 IP-in-IP tunnel sessions active Type: Gauge	Int32
sgitunstat-ipv4sesssetup	SGi tunneling Statistics - IPv4 IP-in-IP tunnel sessions setup Type: Counter	Int32
sgitunstat-ipv4sessrel	SGi tunneling Statistics - IPv4 IP-in-IP tunnel sessions released Type: Counter	Int32
sgitunstat-ipv4gresessact	SGi tunneling Statistics - IPv4 GRE tunnel sessions active Type: Gauge	Int32
sgitunstat-ipv4gresesssetup	SGi tunneling Statistics - IPv4 GRE tunnel sessions setup Type: Counter	Int32
sgitunstat-ipv4gresessrel	SGi tunneling Statistics - IPv4 GRE tunnel sessions released Type: Counter	Int32
sgitunstat-ipv6sessact	SGi tunneling Statistics - IPv6 6to4 tunnel sessions active Type: Gauge	Int32
sgitunstat-ipv6sesssetup	SGi tunneling Statistics - IPv6 6to4 tunnel sessions setup Type: Counter	Int32
sgitunstat-ipv6sessrel	SGi tunneling Statistics - IPv6 6to4 tunnel sessions released Type: Counter	Int32
handoverstat-intersgnsnatt	Handover Statistics - Total number of inter-SGSN handover attempts Type: Counter	Int32
handoverstat-intersgnsn succ	Handover Statistics - Total number of successful inter-SGSN handovers Type: Counter	Int32
handoverstat-intersgnsnfail	Handover Statistics - Total number of failed inter-SGSN handovers Type: Counter	Int32

Variables	Description	Data Type
handoverstat-intersgwatt	Handover Statistics - Total number of inter-SGW handover attempts Type: Counter	Int32
handoverstat-intersgwsucc	Handover Statistics - Total number of successful inter-SGW handovers Type: Counter	Int32
handoverstat-intersgwfail	Handover Statistics - Total number of failed inter-SGW handovers Type: Counter	Int32
handoverstat-interhsgwatt	Handover Statistics - Total number of inter-HSGW handover attempts Type: Counter	Int32
handoverstat-interhsgwsucc	Handover Statistics - Total number of successful inter-HSGW handovers Type: Counter	Int32
handoverstat-interhsgwfail	Handover Statistics - Total number of failed inter-HSGW handovers Type: Counter	Int32
handoverstat-gngptolteatt	Handover Statistics - Number of Gn/Gp to LTE attempted handovers Type: Counter	Int32
handoverstat-gngptoltesucc	Handover Statistics - Number of Gn/Gp to LTE successful handovers Type: Counter	Int32
handoverstat-gngptoltefail	Handover Statistics - Number of Gn/Gp to LTE failed handovers Type: Counter	Int32
handoverstat-ltetogngpatt	Handover Statistics - Number of LTE to Gn/Gp attempted handovers Type: Counter	Int32
handoverstat-ltetogngpsucc	Handover Statistics - Number of LTE to Gn/Gp successful handovers Type: Counter	Int32
handoverstat-ltetogngpfail	Handover Statistics - Number of LTE to Gn/Gp failed handovers Type: Counter	Int32
handoverstat-ltetoehrpatt	Handover Statistics - Number of LTE to eHRPD attempted handovers Type: Counter	Int32
handoverstat-ltetoehrpsucc	Handover Statistics - Number of LTE to eHRPD successful handovers Type: Counter	Int32
handoverstat-ltetoehrpfail	Handover Statistics - Number of LTE to eHRPD failed handovers Type: Counter	Int32
handoverstat-ehrpdtolteatt	Handover Statistics - Number of eHRPD to LTE attempted handovers Type: Counter	Int32
handoverstat-ehrpdtoltesucc	Handover Statistics - Number of eHRPD to LTE successful handovers Type: Counter	Int32
handoverstat-ehrpdtoltefail	Handover Statistics - Number of eHRPD to LTE failed handovers Type: Counter	Int32
subqosstat-bearact-qci 1	Subscriber QoS Statistics - Total bearers active - QCI 1 Type: Gauge	Int32

■ Common Syntax Options

Variables	Description	Data Type
subqosstat-bearact-qci2	Subscriber QoS Statistics - Total bearers active - QCI2 Type: Gauge	Int32
subqosstat-bearact-qci3	Subscriber QoS Statistics - Total bearers active - QCI3 Type: Gauge	Int32
subqosstat-bearact-qci4	Subscriber QoS Statistics - Total bearers active - QCI4 Type: Gauge	Int32
subqosstat-bearact-qci5	Subscriber QoS Statistics - Total bearers active - QCI5 Type: Gauge	Int32
subqosstat-bearact-qci6	Subscriber QoS Statistics - Total bearers active - QCI6 Type: Gauge	Int32
subqosstat-bearact-qci7	Subscriber QoS Statistics - Total bearers active - QCI7 Type: Gauge	Int32
subqosstat-bearact-qci8	Subscriber QoS Statistics - Total bearers active - QCI8 Type: Gauge	Int32
subqosstat-bearact-qci9	Subscriber QoS Statistics - Total bearers active - QCI9 Type: Gauge	Int32
subqosstat-bearact-qcinongbr	Subscriber QoS Statistics - Total bearers active - Non-Standard QCI (Non-GBR) Type: Gauge	Int32
subqosstat-bearact-qcigbr	Subscriber QoS Statistics - Total bearers active - Non-Standard QCI (GBR) Type: Gauge	Int32
subqosstat-bearsetup-qci1	Subscriber QoS Statistics - Total bearers setup - QCI1 Type: Counter	Int32
subqosstat-bearsetup-qci2	Subscriber QoS Statistics - Total bearers setup - QCI2 Type: Counter	Int32
subqosstat-bearsetup-qci3	Subscriber QoS Statistics - Total bearers setup - QCI3 Type: Counter	Int32
subqosstat-bearsetup-qci4	Subscriber QoS Statistics - Total bearers setup - QCI4 Type: Counter	Int32
subqosstat-bearsetup-qci5	Subscriber QoS Statistics - Total bearers setup - QCI5 Type: Counter	Int32
subqosstat-bearsetup-qci6	Subscriber QoS Statistics - Total bearers setup - QCI6 Type: Counter	Int32
subqosstat-bearsetup-qci7	Subscriber QoS Statistics - Total bearers setup - QCI7 Type: Counter	Int32
subqosstat-bearsetup-qci8	Subscriber QoS Statistics - Total bearers setup - QCI8 Type: Counter	Int32
subqosstat-bearsetup-qci9	Subscriber QoS Statistics - Total bearers setup - QCI9 Type: Counter	Int32

Variables	Description	Data Type
subqosstat-bearsetup-qcinongbr	Subscriber QoS Statistics - Total bearers setup - Non-Standard QCI (Non-GBR) Type: Counter	Int32
subqosstat-bearsetup-qcigbr	Subscriber QoS Statistics - Total bearers setup - Non-Standard QCI (GBR) Type: Counter	Int32
subqosstat-bearrel-qci1	Subscriber QoS Statistics - Total bearers released - QCI 1 Type: Counter	Int32
subqosstat-bearrel-qci2	Subscriber QoS Statistics - Total bearers released - QCI 2 Type: Counter	Int32
subqosstat-bearrel-qci3	Subscriber QoS Statistics - Total bearers released - QCI 3 Type: Counter	Int32
subqosstat-bearrel-qci4	Subscriber QoS Statistics - Total bearers released - QCI 4 Type: Counter	Int32
subqosstat-bearrel-qci5	Subscriber QoS Statistics - Total bearers released - QCI 5 Type: Counter	Int32
subqosstat-bearrel-qci6	Subscriber QoS Statistics - Total bearers released - QCI 6 Type: Counter	Int32
subqosstat-bearrel-qci7	Subscriber QoS Statistics - Total bearers released - QCI 7 Type: Counter	Int32
subqosstat-bearrel-qci8	Subscriber QoS Statistics - Total bearers released - QCI 8 Type: Counter	Int32
subqosstat-bearrel-qci9	Subscriber QoS Statistics - Total bearers released - QCI 9 Type: Counter	Int32
subqosstat-bearrel-qcinongbr	Subscriber QoS Statistics - Total bearers released - Non-Standard QCI (Non-GBR) Type: Counter	Int32
subqosstat-bearrel-qcigbr	Subscriber QoS Statistics - Total bearers released - Non-Standard QCI (GBR) Type: Counter	Int32
subdatastat-totuppktfwd	Subscriber Data Statistics - Total Uplink packets forwarded Type: Counter	Int32
subdatastat-uppktfwd-qci1	Subscriber Data Statistics - Uplink packets forwarded - QCI 1 Type: Counter	Int32
subdatastat-uppktfwd-qci2	Subscriber Data Statistics - Uplink packets forwarded - QCI 2 Type: Counter	Int32
subdatastat-uppktfwd-qci3	Subscriber Data Statistics - Uplink packets forwarded - QCI 3 Type: Counter	Int32
subdatastat-uppktfwd-qci4	Subscriber Data Statistics - Uplink packets forwarded - QCI 4 Type: Counter	Int32
subdatastat-uppktfwd-qci5	Subscriber Data Statistics - Uplink packets forwarded - QCI 5 Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
subdatastat-uppktfwd-qci6	Subscriber Data Statistics -Uplink packets forwarded - QCI 6 Type: Counter	Int32
subdatastat-uppktfwd-qci7	Subscriber Data Statistics -Uplink packets forwarded - QCI 7 Type: Counter	Int32
subdatastat-uppktfwd-qci8	Subscriber Data Statistics -Uplink packets forwarded - QCI 8 Type: Counter	Int32
subdatastat-uppktfwd-qci9	Subscriber Data Statistics -Uplink packets forwarded - QCI 9 Type: Counter	Int32
subdatastat-uppktfwd-stdqcinongbr	Subscriber Data Statistics - Uplink packets forwarded - Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-uppktfwd-stdqciubr	Subscriber Data Statistics - Uplink packets forwarded - Standard QCI (GBR) Type: Counter	Int32
subdatastat-uppktfwd-qcinongbr	Subscriber Data Statistics - Uplink packets forwarded - Non-Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-uppktfwd-qciubr	Subscriber Data Statistics - Uplink packets forwarded - Non-Standard QCI (GBR) Type: Counter	Int32
subdatastat-uppktfwd-totubr	Subscriber Data Statistics - Uplink packets forwarded - Total GBR Type: Counter	Int32
subdatastat-uppktfwd-totnongbr	Subscriber Data Statistics - Uplink packets forwarded - Total Non-GBR Type: Counter	Int32
subdatastat-totupbytefwd	Subscriber Data Statistics - Total Uplink bytes forwarded Type: Counter	Int64
subdatastat-upbytefwd-qci1	Subscriber Data Statistics - Uplink bytes forwarded - QCI 1 Type: Counter	Int64
subdatastat-upbytefwd-qci2	Subscriber Data Statistics - Uplink bytes forwarded - QCI 2 Type: Counter	Int64
subdatastat-upbytefwd-qci3	Subscriber Data Statistics - Uplink bytes forwarded - QCI 3 Type: Counter	Int64
subdatastat-upbytefwd-qci4	Subscriber Data Statistics - Uplink bytes forwarded - QCI 4 Type: Counter	Int64
subdatastat-upbytefwd-qci5	Subscriber Data Statistics - Uplink bytes forwarded - QCI 5 Type: Counter	Int64
subdatastat-upbytefwd-qci6	Subscriber Data Statistics - Uplink bytes forwarded - QCI 6 Type: Counter	Int64
subdatastat-upbytefwd-qci7	Subscriber Data Statistics - Uplink bytes forwarded - QCI 7 Type: Counter	Int64

Variables	Description	Data Type
subdatastat-upbytefwd-qci8	Subscriber Data Statistics - Uplink bytes forwarded - QCI 8 Type: Counter	Int64
subdatastat-upbytefwd-qci9	Subscriber Data Statistics - Uplink bytes forwarded - QCI 9 Type: Counter	Int64
subdatastat-upbytefwd-stdqcinongbr	Subscriber Data Statistics - Uplink bytes forwarded - Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-upbytefwd-stdqcigbr	Subscriber Data Statistics - Uplink bytes forwarded - Standard QCI (GBR) Type: Counter	Int64
subdatastat-upbytefwd-qcinongbr	Subscriber Data Statistics - Uplink bytes forwarded - Non-Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-upbytefwd-qcigbr	Subscriber Data Statistics - Uplink bytes forwarded - Non-Standard QCI (GBR) Type: Counter	Int64
subdatastat-upbytefwd-totgbr	Subscriber Data Statistics - Uplink bytes forwarded - Total GBR Type: Counter	Int64
subdatastat-upbytefwd-totnongbr	Subscriber Data Statistics - Uplink bytes forwarded - Total NON-GBR Type: Counter	Int64
subdatastat-totdownpktfwd	Subscriber Data Statistics - Total Downlink packets forwarded Type: Counter	Int32
subdatastat-downpktfwd-qci1	Subscriber Data Statistics - Downlink packets forwarded - QCI 1 Type: Counter	Int32
subdatastat-downpktfwd-qci2	Subscriber Data Statistics - Downlink packets forwarded - QCI 2 Type: Counter	Int32
subdatastat-downpktfwd-qci3	Subscriber Data Statistics - Downlink packets forwarded - QCI 3 Type: Counter	Int32
subdatastat-downpktfwd-qci4	Subscriber Data Statistics - Downlink packets forwarded - QCI 4 Type: Counter	Int32
subdatastat-downpktfwd-qci5	Subscriber Data Statistics - Downlink packets forwarded - QCI 5 Type: Counter	Int32
subdatastat-downpktfwd-qci6	Subscriber Data Statistics - Downlink packets forwarded - QCI 6 Type: Counter	Int32
subdatastat-downpktfwd-qci7	Subscriber Data Statistics - Downlink packets forwarded - QCI 7 Type: Counter	Int32
subdatastat-downpktfwd-qci8	Subscriber Data Statistics - Downlink packets forwarded - QCI 8 Type: Counter	Int32
subdatastat-downpktfwd-qci9	Subscriber Data Statistics - Downlink packets forwarded - QCI 9 Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
subdatastat-downpktfwd-stdqcinongbr	Subscriber Data Statistics - Downlink packets forwarded - Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-downpktfwd-stdqcigr	Subscriber Data Statistics - Downlink packets forwarded - Standard QCI (GBR) Type: Counter	Int32
subdatastat-downpktfwd-qcinongbr	Subscriber Data Statistics - Downlink packets forwarded - Non-Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-downpktfwd-qcigr	Subscriber Data Statistics - Downlink packets forwarded - Non-Standard QCI (GBR) Type: Counter	Int32
subdatastat-downpktfwd-totgbr	Subscriber Data Statistics - Downlink packets forwarded - Total GBR Type: Counter	Int32
subdatastat-downpktfwd-totnongbr	Subscriber Data Statistics - Downlink packets forwarded - Total Non-GBR Type: Counter	Int32
subdatastat-totdownbytefwd	Subscriber Data Statistics - Total Downlink bytes forwarded Type: Counter	Int64
subdatastat-downbytefwd-qci1	Subscriber Data Statistics - Downlink bytes forwarded - QCI 1 Type: Counter	Int64
subdatastat-downbytefwd-qci2	Subscriber Data Statistics - Downlink bytes forwarded - QCI 2 Type: Counter	Int64
subdatastat-downbytefwd-qci3	Subscriber Data Statistics - Downlink bytes forwarded - QCI 3 Type: Counter	Int64
subdatastat-downbytefwd-qci4	Subscriber Data Statistics - Downlink bytes forwarded - QCI 4 Type: Counter	Int64
subdatastat-downbytefwd-qci5	Subscriber Data Statistics - Downlink bytes forwarded - QCI 5 Type: Counter	Int64
subdatastat-downbytefwd-qci6	Subscriber Data Statistics - Downlink bytes forwarded - QCI 6 Type: Counter	Int64
subdatastat-downbytefwd-qci7	Subscriber Data Statistics - Downlink bytes forwarded - QCI 7 Type: Counter	Int64
subdatastat-downbytefwd-qci8	Subscriber Data Statistics - Downlink bytes forwarded - QCI 8 Type: Counter	Int64
subdatastat-downbytefwd-qci9	Subscriber Data Statistics - Downlink bytes forwarded - QCI 9 Type: Counter	Int64
subdatastat-downbytefwd-stdqcinongbr	Subscriber Data Statistics - Downlink bytes forwarded - Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-downbytefwd-stdqcigr	Subscriber Data Statistics - Downlink bytes forwarded - Standard QCI (GBR) Type: Counter	Int64

Variables	Description	Data Type
subdatastat-downbytefwd-qcinongbr	Subscriber Data Statistics - Downlink bytes forwarded - Non-Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-downbytefwd-qcigbr	Subscriber Data Statistics - Downlink bytes forwarded - Non-Standard QCI (GBR) Type: Counter	Int64
subdatastat-downbytefwd-totgbr	Subscriber Data Statistics - Downlink bytes forwarded - Total GBR Type: Counter	Int64
subdatastat-downbytefwd-totnongbr	Subscriber Data Statistics - Downlink bytes forwarded - Total Non-GBR Type: Counter	Int64
subdatastat-totuppktdrop	Subscriber Data Statistics - Total Uplink packets dropped Type: Counter	Int32
subdatastat-uppktdrop-qci1	Subscriber Data Statistics -Uplink packets dropped - QCI 1 Type: Counter	Int32
subdatastat-uppktdrop-qci2	Subscriber Data Statistics -Uplink packets dropped - QCI 2 Type: Counter	Int32
subdatastat-uppktdrop-qci3	Subscriber Data Statistics -Uplink packets dropped - QCI 3 Type: Counter	Int32
subdatastat-uppktdrop-qci4	Subscriber Data Statistics -Uplink packets dropped - QCI 4 Type: Counter	Int32
subdatastat-uppktdrop-qci5	Subscriber Data Statistics -Uplink packets dropped - QCI 5 Type: Counter	Int32
subdatastat-uppktdrop-qci6	Subscriber Data Statistics -Uplink packets dropped - QCI 6 Type: Counter	Int32
subdatastat-uppktdrop-qci7	Subscriber Data Statistics -Uplink packets dropped - QCI 7 Type: Counter	Int32
subdatastat-uppktdrop-qci8	Subscriber Data Statistics -Uplink packets dropped - QCI 8 Type: Counter	Int32
subdatastat-uppktdrop-qci9	Subscriber Data Statistics -Uplink packets dropped - QCI 9 Type: Counter	Int32
subdatastat-uppktdrop-stdqcinongbr	Subscriber Data Statistics - Uplink packets dropped - Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-uppktdrop-stdqcigbr	Subscriber Data Statistics - Uplink packets dropped - Standard QCI (GBR) Type: Counter	Int32
subdatastat-uppktdrop-qcinongbr	Subscriber Data Statistics - Uplink packets dropped - Non-Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-uppktdrop-qcigbr	Subscriber Data Statistics - Uplink packets dropped - Non-Standard QCI (GBR) Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
subdatastat-uppktdrop-totgbr	Subscriber Data Statistics - Uplink packets dropped - Total GBR Type: Counter	Int32
subdatastat-uppktdrop-totnongbr	Subscriber Data Statistics - Uplink packets dropped - Total Non-GBR Type: Counter	Int32
subdatastat-totupbytedrop	Subscriber Data Statistics - Total Uplink bytes dropped Type: Counter	Int64
subdatastat-upbytedrop-qci1	Subscriber Data Statistics - Uplink bytes dropped - QCI 1 Type: Counter	Int64
subdatastat-upbytedrop-qci2	Subscriber Data Statistics - Uplink bytes dropped - QCI 2 Type: Counter	Int64
subdatastat-upbytedrop-qci3	Subscriber Data Statistics - Uplink bytes dropped - QCI 3 Type: Counter	Int64
subdatastat-upbytedrop-qci4	Subscriber Data Statistics - Uplink bytes dropped - QCI 4 Type: Counter	Int64
subdatastat-upbytedrop-qci5	Subscriber Data Statistics - Uplink bytes dropped - QCI 5 Type: Counter	Int64
subdatastat-upbytedrop-qci6	Subscriber Data Statistics - Uplink bytes dropped - QCI 6 Type: Counter	Int64
subdatastat-upbytedrop-qci7	Subscriber Data Statistics - Uplink bytes dropped - QCI 7 Type: Counter	Int64
subdatastat-upbytedrop-qci8	Subscriber Data Statistics - Uplink bytes dropped - QCI 8 Type: Counter	Int64
subdatastat-upbytedrop-qci9	Subscriber Data Statistics - Uplink bytes dropped - QCI 9 Type: Counter	Int64
subdatastat-upbytedrop-stdqcinongbr	Subscriber Data Statistics - Uplink bytes dropped - Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-upbytedrop-stdqcigbr	Subscriber Data Statistics - Uplink bytes dropped - Standard QCI (GBR) Type: Counter	Int64
subdatastat-upbytedrop-qcinongbr	Subscriber Data Statistics - Uplink bytes dropped - Non-Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-upbytedrop-qcigbr	Subscriber Data Statistics - Uplink bytes dropped - Non-Standard QCI (GBR) Type: Counter	Int64
subdatastat-upbytedrop-totgbr	Subscriber Data Statistics - Uplink bytes dropped - Total GBR Type: Counter	Int64
subdatastat-upbytedrop-totnongbr	Subscriber Data Statistics - Uplink bytes dropped - Total Non-GBR Type: Counter	Int64
subdatastat-totdownpktdrop	Subscriber Data Statistics - Total Downlink packets dropped Type: Counter	Int32

Variables	Description	Data Type
subdatastat-downpktdrop-qci1	Subscriber Data Statistics - Downlink packets dropped - QCI 1 Type: Counter	Int32
subdatastat-downpktdrop-qci2	Subscriber Data Statistics - Downlink packets dropped - QCI 2 Type: Counter	Int32
subdatastat-downpktdrop-qci3	Subscriber Data Statistics - Downlink packets dropped - QCI 3 Type: Counter	Int32
subdatastat-downpktdrop-qci4	Subscriber Data Statistics - Downlink packets dropped - QCI 4 Type: Counter	Int32
subdatastat-downpktdrop-qci5	Subscriber Data Statistics - Downlink packets dropped - QCI 5 Type: Counter	Int32
subdatastat-downpktdrop-qci6	Subscriber Data Statistics - Downlink packets dropped - QCI 6 Type: Counter	Int32
subdatastat-downpktdrop-qci7	Subscriber Data Statistics - Downlink packets dropped - QCI 7 Type: Counter	Int32
subdatastat-downpktdrop-qci8	Subscriber Data Statistics - Downlink packets dropped - QCI 8 Type: Counter	Int32
subdatastat-downpktdrop-qci9	Subscriber Data Statistics - Downlink packets dropped - QCI 9 Type: Counter	Int32
subdatastat-downpktdrop-stdqcinongbr	Subscriber Data Statistics - Downlink packets dropped - Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-downpktdrop-stdqcigbr	Subscriber Data Statistics - Downlink packets dropped - Standard QCI (GBR) Type: Counter	Int32
subdatastat-downpktdrop-qcinongbr	Subscriber Data Statistics - Downlink packets dropped - Non-Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-downpktdrop-qcigbr	Subscriber Data Statistics - Downlink packets dropped - Non-Standard QCI (GBR) Type: Counter	Int32
subdatastat-downpktdrop-totgbr	Subscriber Data Statistics - Downlink packets dropped - Total GBR Type: Counter	Int32
subdatastat-downpktdrop-totnongbr	Subscriber Data Statistics - Downlink packets dropped - Total Non-GBR Type: Counter	Int32
subdatastat-totdownbytedrop	Subscriber Data Statistics - Total Downlink bytes dropped Type: Counter	Int64
subdatastat-downbytedrop-qci1	Subscriber Data Statistics - Downlink bytes dropped - QCI 1 Type: Counter	Int64
subdatastat-downbytedrop-qci2	Subscriber Data Statistics - Downlink bytes dropped - QCI 2 Type: Counter	Int64

■ Common Syntax Options

Variables	Description	Data Type
subdatastat-downbytedrop-qci3	Subscriber Data Statistics - Downlink bytes dropped - QCI3 Type: Counter	Int64
subdatastat-downbytedrop-qci4	Subscriber Data Statistics - Downlink bytes dropped - QCI4 Type: Counter	Int64
subdatastat-downbytedrop-qci5	Subscriber Data Statistics - Downlink bytes dropped - QCI5 Type: Counter	Int64
subdatastat-downbytedrop-qci6	Subscriber Data Statistics - Downlink bytes dropped - QCI6 Type: Counter	Int64
subdatastat-downbytedrop-qci7	Subscriber Data Statistics - Downlink bytes dropped - QCI7 Type: Counter	Int64
subdatastat-downbytedrop-qci8	Subscriber Data Statistics - Downlink bytes dropped - QCI8 Type: Counter	Int64
subdatastat-downbytedrop-qci9	Subscriber Data Statistics - Downlink bytes dropped - QCI9 Type: Counter	Int64
subdatastat-downbytedrop-stdqcinongbr	Subscriber Data Statistics - Downlink bytes dropped - Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-downbytedrop-stdqcigr	Subscriber Data Statistics - Downlink bytes dropped - Standard QCI (GBR) Type: Counter	Int64
subdatastat-downbytedrop-qcinongbr	Subscriber Data Statistics - Downlink bytes dropped - Non-Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-downbytedrop-qcigr	Subscriber Data Statistics - Downlink bytes dropped - Non-Standard QCI (GBR) Type: Counter	Int64
subdatastat-downbytedrop-totgbr	Subscriber Data Statistics - Downlink bytes dropped - Total GBR Type: Counter	Int64
subdatastat-downbytedrop-totnongbr	Subscriber Data Statistics - Downlink bytes dropped - Total Non-GBR Type: Counter	Int64
subdatastat-totuppktdropmbrexc	Subscriber Data Statistics - Total Uplink packets Drop mbr exceed Type: Counter	Int32
subdatastat-uppktdropmbrexc-qci1	Subscriber Data Statistics - Uplink packets Drop mbr exceed - QCI 1 Type: Counter	Int32
subdatastat-uppktdropmbrexc-qci2	Subscriber Data Statistics - Uplink packets Drop mbr exceed - QCI 2 Type: Counter	Int32
subdatastat-uppktdropmbrexc-qci3	Subscriber Data Statistics - Uplink packets Drop mbr exceed - QCI 3 Type: Counter	Int32
subdatastat-uppktdropmbrexc-qci4	Subscriber Data Statistics - Uplink packets Drop mbr exceed - QCI 4 Type: Counter	Int32
subdatastat-uppktdropmbrexc-qci5	Subscriber Data Statistics - Uplink packets Drop mbr exceed - QCI 5 Type: Counter	Int32

Variables	Description	Data Type
subdatastat-uppktdropmbrexc-qci6	Subscriber Data Statistics - Uplink packets Drop mbr exceed - QCI 6 Type: Counter	Int32
subdatastat-uppktdropmbrexc-qci7	Subscriber Data Statistics - Uplink packets Drop mbr exceed - QCI 7 Type: Counter	Int32
subdatastat-uppktdropmbrexc-qci8	Subscriber Data Statistics - Uplink packets Drop mbr exceed - QCI 8 Type: Counter	Int32
subdatastat-uppktdropmbrexc-qci9	Subscriber Data Statistics - Uplink packets Drop mbr exceed - QCI 9 Type: Counter	Int32
subdatastat-uppktdropmbrexc-stdqcinongbr	Subscriber Data Statistics - Uplink packets Drop mbr exceed - Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-uppktdropmbrexc-stdqcigbr	Subscriber Data Statistics - Uplink packets Drop mbr exceed - Standard QCI (GBR) Type: Counter	Int32
subdatastat-uppktdropmbrexc-qcinongbr	Subscriber Data Statistics - Uplink packets Drop mbr exceed - Non-Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-uppktdropmbrexc-qcigbr	Subscriber Data Statistics - Uplink packets Drop mbr exceed - Non-Standard QCI (GBR) Type: Counter	Int32
subdatastat-uppktdropmbrexc-totgbr	Subscriber Data Statistics - Uplink packets Drop mbr exceed - Total GBR Type: Counter	Int32
subdatastat-uppktdropmbrexc-totnongbr	Subscriber Data Statistics - Uplink packets Drop mbr exceed - Total Non-GBR Type: Counter	Int32
subdatastat-totupbytedropmbrexc	Subscriber Data Statistics - Total Uplink bytes Drop mbr exceed Type: Counter	Int64
subdatastat-upbytedropmbrexc-qci1	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - QCI 1 Type: Counter	Int64
subdatastat-upbytedropmbrexc-qci2	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - QCI 2 Type: Counter	Int64
subdatastat-upbytedropmbrexc-qci3	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - QCI 3 Type: Counter	Int64
subdatastat-upbytedropmbrexc-qci4	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - QCI 4 Type: Counter	Int64
subdatastat-upbytedropmbrexc-qci5	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - QCI 5 Type: Counter	Int64
subdatastat-upbytedropmbrexc-qci6	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - QCI 6 Type: Counter	Int64
subdatastat-upbytedropmbrexc-qci7	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - QCI 7 Type: Counter	Int64

Common Syntax Options

Variables	Description	Data Type
subdatastat-upbytedropmbrex-qci8	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - QCI 8 Type: Counter	Int64
subdatastat-upbytedropmbrex-qci9	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - QCI 9 Type: Counter	Int64
subdatastat-upbytedropmbrex-stdqcinongbr	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-upbytedropmbrex-stdqciubr	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - Standard QCI (GBR) Type: Counter	Int64
subdatastat-upbytedropmbrex-qcinongbr	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - Non-Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-upbytedropmbrex-qciubr	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - Non-Standard QCI (GBR) Type: Counter	Int64
subdatastat-upbytedropmbrex-totgbr	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - Total GBR Type: Counter	Int64
subdatastat-upbytedropmbrex-totnongbr	Subscriber Data Statistics - Uplink bytes Drop mbr exceed - Total NON-GBR Type: Counter	Int64
subdatastat-totdownpktdropmbrex	Subscriber Data Statistics - Total Downlink packets Drop mbr exceed Type: Counter	Int32
subdatastat-downpktdropmbrex-qci1	Subscriber Data Statistics - Downlink packets Drop mbr exceed - QCI 1 Type: Counter	Int32
subdatastat-downpktdropmbrex-qci2	Subscriber Data Statistics - Downlink packets Drop mbr exceed - QCI 2 Type: Counter	Int32
subdatastat-downpktdropmbrex-qci3	Subscriber Data Statistics - Downlink packets Drop mbr exceed - QCI 3 Type: Counter	Int32
subdatastat-downpktdropmbrex-qci4	Subscriber Data Statistics - Downlink packets Drop mbr exceed - QCI 4 Type: Counter	Int32
subdatastat-downpktdropmbrex-qci5	Subscriber Data Statistics - Downlink packets Drop mbr exceed - QCI 5 Type: Counter	Int32
subdatastat-downpktdropmbrex-qci6	Subscriber Data Statistics - Downlink packets Drop mbr exceed - QCI 6 Type: Counter	Int32
subdatastat-downpktdropmbrex-qci7	Subscriber Data Statistics - Downlink packets Drop mbr exceed - QCI 7 Type: Counter	Int32
subdatastat-downpktdropmbrex-qci8	Subscriber Data Statistics - Downlink packets Drop mbr exceed - QCI 8 Type: Counter	Int32
subdatastat-downpktdropmbrex-qci9	Subscriber Data Statistics - Downlink packets Drop mbr exceed - QCI 9 Type: Counter	Int32

Variables	Description	Data Type
subdatastat-downpktdropmbrexc-stdqcinongbr	Subscriber Data Statistics - Downlink packets Drop mbr exceed - Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-downpktdropmbrexc-stdq cigbr	Subscriber Data Statistics - Downlink packets Drop mbr exceed - Standard QCI (GBR) Type: Counter	Int32
subdatastat-downpktdropmbrexc-qcinongbr	Subscriber Data Statistics - Downlink packets Drop mbr exceed - Non-Standard QCI (Non-GBR) Type: Counter	Int32
subdatastat-downpktdropmbrexc-q cigbr	Subscriber Data Statistics - Downlink packets Drop mbr exceed - Non-Standard QCI (GBR) Type: Counter	Int32
subdatastat-downpktdropmbrexc-totgbr	Subscriber Data Statistics - Downlink packets Drop mbr exceed - Total GBR Type: Counter	Int32
subdatastat-downpktdropmbrexc-totnongbr	Subscriber Data Statistics - Downlink packets Drop mbr exceed - Total NON-GBR Type: Counter	Int32
subdatastat-totdownbytedropmbrexc	Subscriber Data Statistics - Total Downlink bytes Drop mbr exceed Type: Counter	Int64
subdatastat-downbytedropmbrexc-qci1	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - QCI 1 Type: Counter	Int64
subdatastat-downbytedropmbrexc-qci2	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - QCI 2 Type: Counter	Int64
subdatastat-downbytedropmbrexc-qci3	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - QCI 3 Type: Counter	Int64
subdatastat-downbytedropmbrexc-qci4	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - QCI 4 Type: Counter	Int64
subdatastat-downbytedropmbrexc-qci5	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - QCI 5 Type: Counter	Int64
subdatastat-downbytedropmbrexc-qci6	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - QCI 6 Type: Counter	Int64
subdatastat-downbytedropmbrexc-qci7	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - QCI 7 Type: Counter	Int64
subdatastat-downbytedropmbrexc-qci8	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - QCI 8 Type: Counter	Int64
subdatastat-downbytedropmbrexc-qci9	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - QCI 9 Type: Counter	Int64
subdatastat-downbytedropmbrexc-stdqcinongbr	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - Standard QCI (Non-GBR) Type: Counter	Int64

Variables	Description	Data Type
subdatastat-downbytedropmbrex-stdqciubr	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - Standard QCI (GBR) Type: Counter	Int64
subdatastat-downbytedropmbrex-qcinongbr	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - Non-Standard QCI (Non-GBR) Type: Counter	Int64
subdatastat-downbytedropmbrex-qciubr	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - Non-Standard QCI (GBR) Type: Counter	Int64
subdatastat-downbytedropmbrex-totubr	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - Total GBR Type: Counter	Int64
subdatastat-downbytedropmbrex-totnongbr	Subscriber Data Statistics - Downlink bytes Drop mbr exceed - Total NON-GBR Type: Counter	Int64
apnambratelimit-uppktdrop	APN AMBR Rate Limiting Statistics - Uplink packets dropped Type: Counter	Int32
apnambratelimit-downpktdrop	APN AMBR Rate Limiting Statistics - Downlink packets dropped Type: Counter	Int32
apnambratelimit-upbytedrop	APN AMBR Rate Limiting Statistics - Uplink bytes dropped Type: Counter	Int64
apnambratelimit-downbytedrop	APN AMBR Rate Limiting Statistics - Downlink bytes dropped Type: Counter	Int64



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 54

Port Schema Statistics

The Port schema provides operational statistics that can be used for monitoring and troubleshooting the following products: All

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 54. Bulk Statistic Variables in the Port-level Schema

Variables	Description	Data Type
card	Description: Chassis slot numbers. This is a key variable. Type: Information	Int32
port	Description: Port number on the card. This is a key variable. Type: Information	Int32

Variables	Description	Data Type
maxrate	Description: The maximum physical data rate for the port. Type: Information	Int64
rxbytes	Description: The number of bytes received over the port. Type: Counter	Int64
txbytes	Description: The number of bytes transmitted over the port. Type: Counter	Int64
ucast_inpackets	Description: The number of unicast packets received over the port. Type: Counter This statistic is not supported for SPIO ports.	Int64
ucast_outpackets	Description: The number of unicast packets sent over the port. Type: Counter This statistic is not supported for SPIO ports.	Int64
mcast_inpackets	Description: The number of multicast packets received over the port. Type: Counter This statistic is not supported for SPIO ports.	Int64
mcast_outpackets	Description: The number of multicast packets sent over the port. Type: Counter This statistic is not supported for SPIO ports.	Int64
bcast_inpackets	Description: The number of broadcast packets received over the port. Type: Counter This statistic is not supported for SPIO ports.	Int64
bcast_outpackets	Description: The number of broadcast packets sent over the port. Type: Counter This statistic is not supported for SPIO ports.	Int64
rxpackets	Description: The number of packets received over the port. Type: Counter	Int64
txpackets	Description: The number of packets transmitted over the port. Type: Counter	Int64
rxdiscbytes	Description: The number of bytes received over the port that were discarded. Type: Counter	Int64
rxdiscpackets	Description: The number of packets received over the port that were discarded. Type: Counter	Int64
txdiscbytes	Description: The number of bytes transmitted over the port that were discarded. Type: Counter	Int64
txdiscpackets	Description: The number of packets transmitted over the port that were discarded. Type: Counter	Int64
rxerrorbytes	Description: The number of error bytes received over the port. Type: Counter	Int64
rxerrorpackets	Description: The number of error packets received over the port. Type: Counter	Int64

Variables	Description	Data Type
txerrorbytes	Description: The number of error bytes transmitted over the port. Type: Counter	Int64
txerrorpackets	Description: The number of error packets transmitted over the port. Type: Counter	Int64
frag-rcvd	Description: The number of fragments received on this port. Type: Counter	Int64
pkt-reassembled	Description: The number of packets re-assembled from fragments received on this port. Type: Counter	Int64
frag-tokernel	Description: The number of fragments received on this port and sent to the kernel. Type: Counter	Int64
util-rx-curr	Description: The current average port utilization for received data in Mbps. Type: Gauge	Int64
util-tx-curr	Description: The current average port utilization for transmitted data in Mbps. Type: Gauge	Int64
util-rx-5min	Description: The average port utilization for received data over the last five minutes in Mbps. Type: Gauge	Int64
util-tx-5min	Description: The current average port utilization for transmitted data over the last five minutes in Mbps. Type: Gauge	Int64
util-rx-15min	Description: The average port utilization for received data over the last 15 minutes in Mbps. Type: Gauge	Int64
util-tx-15min	Description: The current average port utilization for transmitted data over the last 15 minutes in Mbps. Type: Gauge	Int64
port-5peak-rx-util	Description: This is the peak Rx port utilization for a 1-minute average over the last 5 minutes. Type: Gauge	Int64
port-5peak-tx-util	Description: This is the peak Tx port utilization for a 1-minute average over the last 5 minutes. Type: Gauge	Int64
port-15peak-rx-util	Description: This is the peak Rx port utilization for a 1-minute average over the last 15 minutes. Type: Gauge	Int64
port-15peak-tx-util	Description: This is the peak Tx port utilization for a 1-minute average over the last 15 minutes. Type: Gauge	Int64



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 55

PPP Schema Statistics

The PPP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: GGSN, HSGW, MME, P-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 55. Bulk Statistic Variables in the PPP Schema

Variables	Description	Type
vpnname	The name of the context configured on the system that is currently facilitating the service processing the subscriber's session. This is a key variable.	String

Variables	Description	Type
vpnid	The identification number of the context configured on the system that is currently facilitating the service processing the subscriber's session. This is an internal reference number. This is a key variable. Type: Gauge	Int32
servname	The name of the service for which PPP statistics are being displayed. This is a key variable.	String
svctype	The type of the service for which PPP statistics are being displayed. This is a key variable.	String
init	The total number of subscriber sessions that have been received by the system for processing.	Int32
reneg	The total number of subscriber sessions that have been re-negotiated by the system.	Int32
fail-reneg	The total number of subscriber sessions that have failed to be re-negotiated by the system	Int32
success	The total number of subscriber sessions that have been successfully connected by the system.	Int32
failed	The total number of subscriber sessions that the system has/have failed to process.	Int32
released	The total number of subscriber sessions that have been disconnected.	Int32
released-local	The total number of subscriber sessions that have been dropped by the system.	Int32
released-remote	The total number of subscriber sessions that have been dropped by the mobile nodes.	Int32
altppp-connected	The total number of Alt PPP subscriber sessions that have been connected by the system.	Int32
lcp-fail-maxretry	The number of sessions that were released during setup due to the system not receiving a response prior to the expiration of the maximum number of Link Control Protocol (LCP) retries.	Int32
lcp-fail-option	The number of sessions that were released during setup due to failed negotiations between the system and the mobile nodes over Link Control Protocol (LCP) options.	Int32
lcp-fail-unknown	The number of sessions that were released during setup due to failed LCP negotiations for unknown reasons.	Int32
ipcp-fail-maxretry	The number of sessions that were released during setup due to the system not receiving a response prior to the expiration of the maximum number of Internet Protocol Control Protocol (IPCP) retries.	Int32
ipcp-fail-option	The number of sessions that were released during setup due to failed negotiations between the system and the mobile nodes over Internet Protocol Control Protocol (IPCP) options.	Int32
ipcp-fail-unknown	The number of sessions that were released during setup due to failed IPCP negotiations for unknown reasons.	Int32
ipv6cp-fail-maxretry	The number of sessions that were released during setup due to the system not receiving a response prior to the expiration of the maximum number of Internet Protocol version 6 Control Protocol (IPv6CP) retries.	Int32
ipv6cp-fail-optiss	The number of sessions that were released during setup due to failed negotiations between the system and the mobile nodes over Internet Protocol version 6 Control Protocol (IPv6CP) options.	Int32
ipv6cp-fail-unknown	The number of sessions that were released during setup due to failed IPv6CP negotiations for unknown reasons.	Int32
fail-ccp	The number Compression Control Protocol negotiation failures.	Int32
fail-auth	The number of sessions that were released during setup due to subscriber authentication failures.	Int32

Variables	Description	Type
abort-auth	The number of sessions that were released during setup due to aborted authentication processes.	Int32
rp-disc	The number of sessions that were released during setup due to lower-layer disconnects.	Int32
entered-lcp	The number of sessions entering or re-entering the Link Control Protocol (LCP) phase of call setup.	Int32
entered-auth	The number of sessions entering or re-entering the authentication phase of call setup.	Int32
entered-ipcp	The number of sessions entering or re-entering the Internet Protocol Control Protocol (IPCP) phase of call setup.	Int32
entered-ipv6cp	The number of sessions entering or re-entering the Internet Protocol version 6 Control Protocol (IPv6CP) phase of call setup.	Int32
success-lcp	The number of sessions for which LCP was successfully negotiated.	Int32
success-auth	The number of sessions for which authentication was successful.	Int32
reneg-pdsn	The number of session re-negotiations initiated by the system.	Int32
reneg-mobile	The number of session re-negotiations initiated by the mobile nodes.	Int32
reneg-addrmis	The number of session re-negotiations that occurred due to mis-matched IP addresses.	Int32
reneg-rp-handoff	The number of session re-negotiations that occurred due to lower-layer handoffs.	Int32
reneg-update	The number of session re-negotiations that occurred due to parameter updates.	Int32
reneg-other	The number of session re-negotiations that occurred due to other reasons.	Int32
conn-sess-reneg	Indicates the number of PPP renegotiation happened for sessions which are already in connected/established state.	Int32
auth-attempt-chap	The number of sessions that attempted to authenticate using the Challenge Handshake Authentication Protocol (CHAP).	Int32
auth-attempt-pap	The number of sessions that attempted to authenticate using the Password Authentication Protocol (PAP).	Int32
auth-attempt-mschap	The number of sessions that attempted to authenticate using MicroSoft CHAP (MS CHAP).	Int32
auth-success-chap	The number of sessions that successfully authenticated using the Challenge Handshake Authentication Protocol (CHAP).	Int32
auth-success-pap	The number of sessions that successfully authenticated using the Password Authentication Protocol (PAP).	Int32
auth-success-mschap	The number of sessions that successfully authenticated using MicroSoft CHAP (MS CHAP).	Int32
auth-fail-chap	The number of sessions that failed authentication using the Challenge Handshake Authentication Protocol (CHAP).	Int32
auth-fail-pap	The number of sessions that failed authentication using the Password Authentication Protocol (PAP).	Int32
auth-fail-mschap	The number of sessions that failed authentication using MicroSoft CHAP (MS CHAP).	Int32
auth-abort-chap	The number of sessions that aborted authentication while using the Challenge Handshake Authentication Protocol (CHAP).	Int32

■ Common Syntax Options

Variables	Description	Type
auth-abort-pap	The number of sessions that aborted authentication while using the Password Authentication Protocol (PAP).	Int32
auth-abort-mschap	The number of sessions that aborted authentication while using MicroSoft CHAP (MS CHAP).	Int32
sess-skip-auth	The number of sessions that skipped the authentication process.	Int32
comp-stac	The total number of sessions that negotiated the use data compression using the STAC protocol.	Int32
comp-mppc	The total number of sessions that negotiated the use data compression using the MPPC protocol.	Int32
comp-defl	The total number of sessions that negotiated the use data compression using the DEFLATE protocol.	Int32
comp-sess-neg	The total number of sessions that negotiated the use of data compression.	Int32
comp-sess-neg-fail	The total number of sessions for which data compression negotiation failed.	Int32
rcverr-basfcs	The number of packets received with an invalid Frame Check Sequence (FCS).	Int32
timeout-toplus	The total number of PPP authentication requests and NCP configuration requests that timed out.	Int32
rcverr-unknproto	The number of packets received with an invalid protocol type.	Int32
rcverr-badaddr	The number of packets received with a bad address field.	Int32
rcverr-badctrl	The number of packets received with a bad control field.	Int32
comp-vjhdr	The total number of sessions that negotiated the use Van Jacobson header compression.	Int32
comp-rohchdr	The total number of sessions that negotiated the use of ROust Header Compression (ROHC).	Int32
disc-lcp-remote	The number of sessions for which the mobile node initiated the disconnection.	Int32
disc-rp-remote	The number of sessions in which the mobile node disconnected the lower layers of the protocol stack.	Int32
disc-admin	The number of sessions for which the system initiated the disconnection.	Int32
disc-idle-timeout	The number of sessions disconnected due to exceeding their idle timeout limit.	Int32
disc-abs-timeout	The number of sessions disconnected due to exceeding their absolute timeout limit.	Int32
disc-ppp-keepalive	The number of sessions disconnected due to keep alive failures.	Int32
disc-no-resource	The number of sessions disconnected due to lack of resources on the local side (CPU and memory).	Int32
disc-misc	The number of sessions that were disconnected for reasons other than those listed here.	Int32
disc-rp-local	The number of sessions that experienced a local disconnect at the lower-layers.	Int32
disc-add-flow-fail	The number of sessions that experienced a disconnect due to a flow addition failure.	Int32
disc-maxretry-lcp	The number of sessions that experienced a disconnect due to exceeding the maximum number of LCP retries.	Int32
disc-maxretry-ipcp	The number of sessions that experienced a disconnect due to exceeding the maximum number of IPCP retries.	Int32

Variables	Description	Type
disc-max-setup-time	The number of sessions that experienced a disconnect due to exceeding the maximum setup timer.	Int32
disc-bad-dest-vpn	The number of sessions that experienced a disconnect due to the specification of invalid destination context.	Int32
disc-opt-neg-lcp	The number of sessions that experienced a disconnect due to the failed negotiation of an LCP option.	Int32
disc-opt-neg-ipcp	The number of sessions that experienced a disconnect due to the failed negotiation of an IPCP option.	Int32
disc-no-remoteaddr	The number of sessions that experienced a disconnect because no remote IP address was specified.	Int32
disc-typedetect-fail	The number of sessions that experienced a disconnect because the system could not identify the call type.	Int32
disc-bad-src-addr	The number of sessions that experienced a disconnect due to a source address violation.	Int32
disc-ipv6cp-excretry	The number of sessions that experienced a disconnect due to exceeding the maximum number of IPv6CP retries.	Int32
disc-ipv6cp-optnegfail	The number of sessions that experienced a disconnect due to the failed negotiation of an IPv6CP option.	Int32
disc-remote	The number of sessions that experienced a remote disconnect at the upper-layers.	Int32
disc-long-timeout	The number of sessions that experienced a disconnect due to the expiration of the long-duration timer.	Int32
disc-auth-fail	The number of sessions that experienced a disconnect due to PPP authentication failures.	Int32
lcpecho-req-total	The total number of LCP echo request messages sent.	Int32
lcpecho-req-resent	The total number of LCP echo request messages that were re-sent.	Int32
lcpecho-rep-recved	The total number of LCP echo reply messages received.	Int32
lcpecho-timeout	The total number of LCP echo request messages that timed-out prior to the system's receiving a response.	Int32
recverr-ctrl-field	The total number of bad control field errors experienced in received packets.	Int32
recverr-bad-length	The total number of bad packet length errors experienced in received packets.	Int32
remote-term	The number of sessions for which termination was initiated from the remote (mobile) side.	Int32
misc-fail	The number of session failures that occurred due to reasons other than those listed by the other variables.	Int32
in-oct	The number of inbound octets received.	Int64
in-ucast	The number of inbound unicast packets received.	Int32
in-nucast	The number of inbound non-unicast (multicast or broadcast) packets received.	Int32
in-pkt	The number of inbound packets that were received.	Int32
in-discard	The number of inbound packets that were discarded.	Int32

Variables	Description	Type
in-discard-oct	The number of inbound octets that were discarded.	Int32
out-oct	The number of outbound octets transmitted.	Int64
out-ucast	The number of outbound unicast packets transmitted.	Int32
out-nucast	The number of outbound non-unicast (multicast or broadcast) packets transmitted.	Int32
out-pkt	The number of outbound packets that were transmitted.	Int32
out-discard	The number of outbound packets that were discarded.	Int32
out-discard-oct	The number of outbound octets that were discarded.	Int32
num-sessions	The current total number of PPP sessions.	Int32
eap-authattempt	The total number of EAP authentication attempt done on the HSGW. This is collected at the HSGW service level.	Int32
eap-authsuccess	The total number of EAP authentication attempt done on the HSGW and was successful. This is collected at the HSGW service level.	Int32
eap-authfail	The total number of EAP authentication attempt done on the HSGW and was unsuccessful. This is collected at the HSGW service level.	Int32
eap-authabort	The total number of EAP authentication procedures attempted on the HSGW but aborted due to any reason. This is collected at the HSGW service level.	Int32
vsncp-attempt	The total number of Vendor Specific Network Control Protocol (VSNCp) connection attempted on the HSGW. This is collected at the HSGW service level.	Int32
vsncp-conn	The total number of vendor Specific Network Control Protocol (VSNCp) connected to the HSGW. This is collected at the HSGW service level.	Int32
vsncp-fail	The total number of Vendor Specific Network Control Protocol (VSNCp) connections attempted but failed to the HSGW. This is collected at HSGW service level.	Int32
vsncp-rellocal	The total number of Vendor Specific Network Control Protocol (VSNCp) connections released locally by the HSGW. This is collected at HSGW service level.	Int32
vsncp-relremote	The total number of Vendor Specific Network Control Protocol (VSNCp) connections released remotely by peer. This is collected at the HSGW service level.	Int32
vsncp-err-gen	The total number of Vendor Specific Network Control Protocol (VSNCp) errors - general. This is collected at the HSGW service level.	Int32
vsncp-err-unauthapn	The total number of Vendor Specific Network Control Protocol (VSNCp) errors due to an unauthorized APN. This is collected at the HSGW service level.	Int32
vsncp-err-pdnlimit	The total number of Vendor Specific Network Control Protocol (VSNCp) errors due to a PDN limitation. This is collected at the HSGW service level.	Int32

Variables	Description	Type
vsncp-err-nopdngw	The total number of Vendor Specific Network Control Protocol (VSNCNP) errors due to not locating the P-GW. This is collected at the HSGW service level.	Int32
vsncp-err-pdngwunreach	The total number of Vendor Specific Network Control Protocol (VSNCNP) errors due to an unreachable P-GW. This is collected at the HSGW service level.	Int32
vsncp-err-pdngwrej	The total number of Vendor Specific Network Control Protocol (VSNCNP) errors due to a P-GW rejection. This is collected at the HSGW service level.	Int32
vsncp-err-insufparam	The total number of Vendor Specific Network Control Protocol (VSNCNP) errors due to insufficient parameters. This is collected at the HSGW service level.	Int32
vsncp-err-resunava	The total number of Vendor Specific Network Control Protocol (VSNCNP) errors due to unavailable resources. This is collected at the HSGW service level.	Int32
vsncp-err-admpro	The total number of Vendor Specific Network Control Protocol (VSNCNP) errors due to administrator prohibited. This is collected at the HSGW service level.	Int32
vsncp-err-pdniduse	The total number of Vendor Specific Network Control Protocol (VSNCNP) errors due the PDN being already in use. This is collected at the HSGW service level.	Int32
vsncp-err-sublimit	The total number of Vendor Specific Network Control Protocol (VSNCNP) errors due to a subscriber limit. This is collected at the HSGW service level.	Int32
vsncp-err-pdnexist	The total number of Vendor Specific Network Control Protocol (VSNCNP) errors due to the PDN not existing. This is collected at the HSGW service level.	Int32
vsncp-fail-maxretry	Total number of Vendor Specific Network Control Protocol (VSNCNP) connection failed as maximum retry limit for connection setup exhausted. This is collected at the HSGW service level.	Int32
vsncp-fail-optiss	Total number of Vendor Specific Network Control Protocol (VSNCNP) connection failed due to failure option as ISS. This is collected at the HSGW service level.	Int32
vsncp-fail-unk	Total number of Vendor Specific Network Control Protocol (VSNCNP) connection failed due to unknown failure option. This is collected at the HSGW service level.	Int32
lcpvse-req-total	The total number of LCP vendor specific extension request messages sent to mobile stations to update the inactivity timer in conjunction with the always on feature.	Int32
lcpvse-req-resent	The total number of LCP vendor specific extension request messages retransmitted to mobile stations to update the inactivity timer in conjunction with the always on feature.	Int32
lcpvse-rep-recved	The total number of responses to LCP vendor specific extension replies received from mobile stations as part of the inactivity timer update process in conjunction with the always on feature.	Int32

Variables	Description	Type
lcpvse-proto-reject	The total number protocol reject responses received for LCP vendor specific extension request messages sent to mobile stations to update the inactivity timer in conjunction with the always on feature.	Int32
lcpvse-req-maxreach	The total number of max retransmissions reached for LCP vendor specific extension request messages sent to mobile stations to update the inactivity timer in conjunction with the always on feature.	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 56

PS-Network-RANAP Schema Statistics

The PS-Network schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HNB-GW.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 56. Bulk Statistic Variables in the PS-Network-RANAP Schema

Variables	Description	Data Type
nwname	Indicates the name of the Packet Switch (PS) Network connected with specific HNB-GW on which statistics are collected or displayed. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
dest-pt-code	Indicates the destination point code in SS7 notation of SGSN in core network connected with specific HNB-GW of which statistics are collected or displayed. This is a key variable.	String
initial-ue-tx	Indicates the total number of Initial UE message transmitted. Trigger: When Initial UE message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
dir-transfer-rx	Indicates the total number of Direct Transfer message received. Trigger: When Direct Transfer message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
dir-transfer-tx	Indicates the total number of Direct Transfer message transmitted. Trigger: When Direct Transfer message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
reset-rx	Indicates the total number of Reset message received. Trigger: When Reset message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
reset-tx	Indicates the total number of Reset message transmitted. Trigger: When Reset message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
reset-ack-rx	Indicates the total number of Reset Ack message received. Trigger: When Reset Ack message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
reset-ack-tx	Indicates the total number of Reset Ack message transmitted. Trigger: When Reset Ack message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
reset-res-rx	Indicates the total number of Reset Resource message received. Trigger: When Reset Resource message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
reset-res-tx	Indicates the total number of Reset Resource message transmitted. Trigger: When Reset Resource message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
reset-res-ack-rx	Indicates the total number of Reset Resource Ack message received. Trigger: When Reset Resource Ack message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
reset-res-ack-tx	Indicates the total number of Reset Resource Ack message transmitted. Trigger: When Reset Resource Ack message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
iu-rel-req-tx	Indicates the total number of Iu Release Request message transmitted. Trigger: When Iu Release Request message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
iu-rel-cmd-rx	Indicates the total number of Iu Release Command message received. Trigger: When Iu Release Command message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
iu-rel-comp-tx	Indicates the total number of Iu Release Complete message transmitted. Trigger: When Iu Release Complete message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
paging-req-rx	Indicates the total number of Paging Request message received. Trigger: When Paging Request message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rsp-tx	Indicates the total number of RAB Assignment Response message transmitted. Trigger: When RAB Assignment Response message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rsp-tx-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rsp-tx-total-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify Fail. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rsp-tx-rab-fail-local-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-rsp-tx-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Release Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rsp-tx-total-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Release Fail. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rsp-tx-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Release Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-rsp-tx-rab-que-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Queued. Availability: Across all PS Networks	Unsigned Int32
rab-ass-req-rx	Indicates the total number of RAB Assignment Request message received by PS Network. Trigger: When RAB Assignment Request message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rab-ass-req-rx-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message received by PS Network for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by PS Network for RAB Setup/Modify. Availability: Across all PS Networks	Unsigned Int32
rab-ass-req-rx-rab-rel-rx	Indicates the total number of RAB Assignment Request message received by PS Network for RAB Release. Trigger: When RAB Assignment Request message is received by PS Network for RAB Release. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rab-setup-mod-timer-exp	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify Timer Expire. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify Timer Expire. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rab-rel-timer-exp	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Release Timer Expire. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Release Timer Expire. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rab-setup-mod-rel-local-failure	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure. Availability: Across all PS Networks	Unsigned Int32
rab-ass-local-fail-invalid-rab-id	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Radio Network Layer Cause - Invalid RAB Id. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Radio Network Layer Cause - Invalid Rab Id. Availability: Across all PS Networks	Unsigned Int32
rab-ass-local-fail-interact-with-othr-proc	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Radio Network Layer Cause - Interaction With Other Proc. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Radio Network Layer Cause - Interaction With Other Proc. Availability: Across all PS Networks	Unsigned Int32
rab-ass-local-fail-sig-trans-res-fail	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Transport Layer Cause - Signal Transport Resource Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Transport Layer Cause - Signal Transport Resource Fail. Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
rab-ass-local-fail-iu-conn-fail-to-estab	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Transport Layer Cause - Iu Transport Conn failed to Establish. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Transport Layer Cause - Iu Transport Conn failed to Establish. Availability: Across all PS Networks	Unsigned Int32
rab-ass-local-fail-trans-syn-err	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Transfer syntax error. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Transfer syntax error. Availability: Across all PS Networks	Unsigned Int32
rab-ass-local-fail-abs-syn-err-ign	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Abstract syntax error (Ignore). Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Abstract syntax error (Ignore). Availability: Across all PS Networks	Unsigned Int32
rab-ass-local-fail-semantic-err	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Semantic error. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Semantic error. Availability: Across all PS Networks	Unsigned Int32
rab-ass-local-fail-abs-syn-err-rej	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Abstract syntax error (Reject). Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Abstract syntax error (Reject). Availability: Across all PS Networks	Unsigned Int32
rab-ass-local-fail-msg-not-comp	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Message not compatible with receiver state. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Message not compatible with receiver state. Availability: Across all PS Networks	Unsigned Int32
rab-ass-local-fail-falsely-construct-msg	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Abstract syntax error (Falsely constructed message). Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Protocol Layer Cause - Abstract syntax error (Falsely constructed msg). Availability: Across all PS Networks	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rab-ass-local-fail-no-res-avalable	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Miscellaneous Cause - No Resource Available. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Miscellaneous Cause - No Resource Available. Availability: Across all PS Networks	Unsigned Int32
rab-ass-rep-rx-local-fail-unspecified	Indicates the total number of RAB Assignment Response message transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Miscellaneous Cause - Unspecified. Trigger: When RAB Assignment Response message is transmitted by PS Network for RAB Setup/Modify/Release Local Failure with Miscellaneous Cause - Unspecified. Availability: Across all PS Networks	Unsigned Int32
rab-ass-conv-class-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Conversational Class for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by PS Network with Conversational Class for RAB Setup/Modify. Availability: Across all PS Networks	Unsigned Int32
rab-ass-conv-class-rab-rel-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Conversational Class for RAB Release. Trigger: When RAB Assignment Request message is received by PS Network with Conversational Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
rab-ass-conv-class-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Conversational Class for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Conversational Class for RAB Setup/Modify Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-conv-class-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Conversational Class for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Conversational Class for RAB Setup/Modify Fail. Availability: Across all PS Networks	Unsigned Int32
rab-ass-conv-class-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Conversational Class for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Conversational Class for RAB Setup/Modify Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-conv-class-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Conversational Class for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Conversational Class for RAB Release Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-conv-class-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Conversational Class for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Conversational Class for RAB Release Fail. Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
rab-ass-conv-class-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Conversational Class for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Conversational Class for RAB Release Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-conv-class-rab-que-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Conversational Class for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by PS Network with Conversational Class for RAB Queued. Availability: Across all PS Networks	Unsigned Int32
rab-ass-stream-class-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Streaming Class for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by PS Network with Streaming Class for RAB Setup/Modify. Availability: Across all PS Networks	Unsigned Int32
rab-ass-stream-class-rab-rel-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Streaming Class for RAB Release. Trigger: When RAB Assignment Request message is received by PS Network with Streaming Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
rab-ass-stream-class-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Streaming Class for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Streaming Class for RAB Setup/Modify Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-stream-class-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Streaming Class for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Streaming Class for RAB Setup/Modify Fail. Availability: Across all PS Networks	Unsigned Int32
rab-ass-stream-class-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Streaming Class for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Streaming Class for RAB Setup/Modify Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-stream-class-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Streaming Class for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Streaming Class for RAB Release Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-stream-class-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Streaming Class for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Streaming Class for RAB Release Fail. Availability: Across all PS Networks	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rab-ass-stream-class-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Streaming Class for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Streaming Class for RAB Release Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-stream-class-rab-que-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Streaming Class for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by PS Network with Streaming Class for RAB Queued. Availability: Across all PS Networks	Unsigned Int32
rab-ass-inter-class-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Interactive Class for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by PS Network with Interactive Class for RAB Setup/Modify. Availability: Across all PS Networks	Unsigned Int32
rab-ass-inter-class-rab-rel-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Interactive Class for RAB Release. Trigger: When RAB Assignment Request message is received by PS Network with Interactive Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
rab-ass-inter-class-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Interactive Class for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Interactive Class for RAB Setup/Modify Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-inter-class-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Interactive Class for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Interactive Class for RAB Setup/Modify Fail. Availability: Across all PS Networks	Unsigned Int32
rab-ass-inter-class-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Interactive Class for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Interactive Class for RAB Setup/Modify Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-inter-class-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Interactive Class for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Interactive Class for RAB Release Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-inter-class-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Interactive Class for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Interactive Class for RAB Release Fail. Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
rab-ass-inter-class-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Interactive Class for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Interactive Class for RAB Release Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-inter-class-rab-que-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Interactive Class for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by PS Network with Interactive Class for RAB Queued. Availability: Across all PS Networks	Unsigned Int32
rab-ass-back-class-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Background Class for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by PS Network with Background Class for RAB Setup/Modify. Availability: Across all PS Networks	Unsigned Int32
rab-ass-back-class-rab-rel-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Background Class for RAB Release. Trigger: When RAB Assignment Request message is received by PS Network with Background Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
rab-ass-back-class-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Background Class for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Background Class for RAB Setup/Modify Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-back-class-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Background Class for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Background Class for RAB Setup/Modify Fail. Availability: Across all PS Networks	Unsigned Int32
rab-ass-back-class-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Background Class for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Background Class for RAB Setup/Modify Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-back-class-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Background Class for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Background Class for RAB Release Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-back-class-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Background Class for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Background Class for RAB Release Fail. Availability: Across all PS Networks	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
rab-ass-back-class-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Background Class for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Background Class for RAB Release Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-back-class-rab-que-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Background Class for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by PS Network with Background Class for RAB Queued. Availability: Across all PS Networks	Unsigned Int32
rab-ass-unkwn-class-rab-setup-mod-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Unknown Class for RAB Setup/Modify. Trigger: When RAB Assignment Request message is received by PS Network with Unknown Class for RAB Setup/Modify. Availability: Across all PS Networks	Unsigned Int32
rab-ass-unkwn-class-rab-rel-rx	Indicates the total number of RAB Assignment Request message received by PS Network with Unknown Class for RAB Release. Trigger: When RAB Assignment Request message is received by PS Network with Unknown Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
rab-ass-unkwn-class-rab-setup-mod-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Unknown Class for RAB Setup/Modify Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Unknown Class for RAB Setup/Modify Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-unkwn-class-tot-rab-setup-mod-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Unknown Class for RAB Setup/Modify Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Unknown Class for RAB Setup/Modify Fail. Availability: Across all PS Networks	Unsigned Int32
rab-ass-unkwn-class-rab-setup-mod-fail-lcl-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Unknown Class for RAB Setup/Modify Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Unknown Class for RAB Setup/Modify Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-unkwn-class-rab-rel-succ-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Unknown Class for RAB Release Success. Trigger: When RAB Assignment Response message is transmitted by PS Network with Unknown Class for RAB Release Success. Availability: Across all PS Networks	Unsigned Int32
rab-ass-unkwn-class-tot-rab-rel-fail-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Unknown Class for RAB Release Fail. Trigger: When RAB Assignment Response message is transmitted by PS Network with Unknown Class for RAB Release Fail. Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
rab-ass-unkwn-class-rab-rel-fail-local-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Unknown Class for RAB Release Fail (Local). Trigger: When RAB Assignment Response message is transmitted by PS Network with Unknown Class for RAB Release Fail (Local). Availability: Across all PS Networks	Unsigned Int32
rab-ass-unkwn-class-rab-que-tx	Indicates the total number of RAB Assignment Response message transmitted by PS Network with Unknown Class for RAB Queued. Trigger: When RAB Assignment Response message is transmitted by PS Network with Unknown Class for RAB Queued. Availability: Across all PS Networks	Unsigned Int32
reloc-req-rx	Indicates the total number of Relocation Request message received by PS Network. Trigger: When Relocation Request message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
reloc-req-rx-rab-setup-rx	Indicates the total number of Relocation Request message received by PS Network for RAB Setup. Trigger: When Relocation Request message is received by PS Network for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network. Trigger: When Relocation Request Ack message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-tx-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by PS Network for RAB Setup Success. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-tx-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by PS Network for RAB Setup Fail. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-tx-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network for RAB Setup Fail for RAB Setup Fail(Local). Trigger: When Relocation Request Ack message is transmitted by PS Network for RAB Setup Fail for RAB Setup Fail(Local). Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-invalid-rab-id	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Radio Network Layer Cause - Invalid Rab Id. Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Radio Network Layer Cause - Invalid Rab Id. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-interact-othr-proc	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Radio Network Layer Cause - Interaction With Other Proc. Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Radio Network Layer Cause - Interaction With Other Proc. Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
reloc-req-ack-local-fail-sig-trans-res-fail	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Transport Layer Cause - Signal Transport Resource Fail. Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Transport Layer Cause - Signal Transport Resource Fail. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-iu-conn-fail-to-estab	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Transport Layer Cause - Iu Transport Conn failed to Establish. Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Transport Layer Cause - Iu Transport Conn failed to Establish. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-trans-syn-err	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Transfer syntax error. Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Transfer syntax error. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-abs-syn-err-ign	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Abstract syntax error(Ignore). Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Abstract syntax error(Ignore). Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-semantic-err	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Semantic error. Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Semantic error. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-abs-syn-err-rej	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Abstract syntax error (Reject). Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Abstract syntax error (Reject). Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-msg-not-comp	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Message not compatible with receiver state. Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Message not compatible with receiver state. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-falsely-construct-msg	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Abstract syntax error (Falsely constructed msg). Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Protocol Layer Cause - Abstract syntax error (Falsely constructed msg). Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
reloc-req-ack-local-fail-no-res-avalable	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Miscellaneous Cause - No Resource Available. Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Miscellaneous Cause - No Resource Available. Availability: Across all PS Networks	Unsigned Int32
reloc-req-ack-local-fail-unspecified	Indicates the total number of Relocation Request Ack message transmitted by PS Network for Local RAB Setup Failure with Miscellaneous Cause - Unspecified. Trigger: When Relocation Request Ack message is transmitted by PS Network for Local RAB Setup Failure with Miscellaneous Cause - Unspecified. Availability: Across all PS Networks	Unsigned Int32
reloc-req-conv-class-rab-setup-rx	Indicates the total number of Relocation Request message received by PS Network with Conversational Class for RAB Setup. Trigger: When Relocation Request message is received by PS Network with Conversational Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-req-conv-class-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Conversational Class for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by PS Network with Conversational Class for RAB Setup Success. Availability: Across all PS Networks	Unsigned Int32
reloc-req-conv-class-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Conversational Class for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by PS Network with Conversational Class for RAB Setup Fail. Availability: Across all PS Networks	Unsigned Int32
reloc-req-conv-class-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Conversational Class for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by PS Network with Conversational Class for RAB Setup Fail (Local). Availability: Across all PS Networks	Unsigned Int32
reloc-req-stream-class-rab-setup-rx	Indicates the total number of Relocation Request message received by PS Network with Streaming Class for RAB Setup. Trigger: When Relocation Request message is received by PS Network with Streaming Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-req-stream-class-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Streaming Class for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by PS Network with Streaming Class for RAB Setup Success. Availability: Across all PS Networks	Unsigned Int32
reloc-req-stream-class-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Streaming Class for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by PS Network with Streaming Class for RAB Setup Fail. Availability: Across all PS Networks	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
reloc-req-stream-class-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Streaming Class for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by PS Network with Streaming Class for RAB Setup Fail (Local). Availability: Across all PS Networks	Unsigned Int32
reloc-req-inter-class-rab-setup-rx	Indicates the total number of Relocation Request message received by PS Network with Interactive Class for RAB Setup. Trigger: When Relocation Request message is received by PS Network with Interactive Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-req-inter-class-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Interactive Class for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by PS Network with Interactive Class for RAB Setup Success. Availability: Across all PS Networks	Unsigned Int32
reloc-req-inter-class-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Interactive Class for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by PS Network with Interactive Class for RAB Setup Fail. Availability: Across all PS Networks	Unsigned Int32
reloc-req-inter-class-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Interactive Class for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by PS Network with Interactive Class for RAB Setup Fail (Local). Availability: Across all PS Networks	Unsigned Int32
reloc-req-back-class-rab-setup-rx	Indicates the total number of Relocation Request message received by PS Network with Background Class for RAB Setup. Trigger: When Relocation Request message is received by PS Network with Background Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-req-back-class-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Background Class for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by PS Network with Background Class for RAB Setup Success. Availability: Across all PS Networks	Unsigned Int32
reloc-req-back-class-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Background Class for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by PS Network with Background Class for RAB Setup Fail. Availability: Across all PS Networks	Unsigned Int32
reloc-req-back-class-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Background Class for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by PS Network with Background Class for RAB Setup Fail (Local). Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
reloc-req-unkwn-class-rab-setup-tx	Indicates the total number of Relocation Request message received by PS Network with Unknown Class for RAB Setup. Trigger: When Relocation Request message is received by PS Network with Unknown Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-req-unkwn-class-rab-setup-succ-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Unknown Class for RAB Setup Success. Trigger: When Relocation Request Ack message is transmitted by PS Network with Unknown Class for RAB Setup Success. Availability: Across all PS Networks	Unsigned Int32
reloc-req-unkwn-class-tot-rab-setup-fail-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Unknown Class for RAB Setup Fail. Trigger: When Relocation Request Ack message is transmitted by PS Network with Unknown Class for RAB Setup Fail. Availability: Across all PS Networks	Unsigned Int32
reloc-req-unkwn-class-rab-setup-fail-local-tx	Indicates the total number of Relocation Request Ack message transmitted by PS Network with Unknown Class for RAB Setup Fail (Local). Trigger: When Relocation Request Ack message is transmitted by PS Network with Unknown Class for RAB Setup Fail (Local). Availability: Across all PS Networks	Unsigned Int32
reloc-detect-tx	Indicates the total number of Relocation Detect message transmitted by PS Network. Trigger: When Relocation Detect message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
reloc-comp-tx	Indicates the total number of Relocation Complete message transmitted by PS Network. Trigger: When Relocation Complete message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
total-reloc-fail-tx	Indicates the total number of Relocation Failure message transmitted by PS Network. Trigger: When Relocation Failure message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
reloc-fail-local-tx	Indicates the total number of Relocation Failure message transmitted by PS Network for Relocation Failure (Local). Trigger: When Relocation Failure message is transmitted by PS Network for Relocation Failure (Local). Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-invalid-rab-id	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Radio Network Layer Cause - Invalid RAB Id. Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Radio Network Layer Cause - Invalid RAB Id. Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-interact-othr-proc	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Radio Network Layer Cause - Interaction with other procedure.. Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Radio Network Layer Cause - Interaction with other procedure.. Availability: Across all PS Networks	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
reloc-fail-tx-local-fail-sig-trans-res-fail	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Transport Layer Cause - Signal Transport Resource Fail. Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Transport Layer Cause - Signal Transport Resource Fail. Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-iu-conn-fail-to-estab	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Transport Layer Cause - Iu Transport Conn failed to Establish. Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Transport Layer Cause - Iu Transport Conn failed to Establish. Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-trans-syn-err	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Protocol Layer Cause Transfer syntax error. Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Protocol Layer Cause Transfer syntax error. Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-abs-syn-err-ign	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Protocol Layer Cause - Abstract syntax error(Ignore). Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Protocol Layer Cause - Abstract syntax error(Ignore). Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-semantic-err	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Protocol Layer Cause - Semantic error. Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Protocol Layer Cause - Semantic error. Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-abs-syn-err-rej	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Protocol Layer Cause - Abstract syntax error(Reject). Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Protocol Layer Cause - Abstract syntax error(Reject). Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-msg-not-comp	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Protocol Layer Cause - Message not compatible with receiver state. Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Protocol Layer Cause - Message not compatible with receiver state. Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-falsely-construct-msg	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Protocol Layer Cause - Abstract syntax error(Falsely constructed msg). Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Protocol Layer Cause - Abstract syntax error(Falsely constructed msg). Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
reloc-fail-tx-local-fail-no-res-available	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Miscellaneous Cause - No Resource Available. Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Miscellaneous Cause - No Resource Available. Availability: Across all PS Networks	Unsigned Int32
reloc-fail-tx-local-fail-unspecified	Indicates the total number of Relocation Failure message received by PS Network for Local Relocation Failure with Miscellaneous Cause - Unspecified. Trigger: When Relocation Failure message is received by PS Network for Local Relocation Failure with Miscellaneous Cause - Unspecified. Availability: Across all PS Networks	Unsigned Int32
reloc-reqd-tx	Indicates the total number of Relocation Required message transmitted by PS Network. Trigger: When Relocation Required message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
reloc-prep-failure-rx	Indicates the total number of Relocation Prep Failure message received by PS Network. Trigger: When Relocation Prep Failure message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
fwd-srms-ctx-req-tx	Indicates the total number of Fwd SRNS Context Request message transmitted by PS Network. Trigger: When Fwd SRNS Context Request message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-rx	Indicates the total number of Relocation Command message received by PS Network. Trigger: When Relocation Command message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-rx-rab-setup-rx	Indicates the total number of Relocation Command message received by PS Network for RAB Setup. Trigger: When Relocation Command message is received by PS Network for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-rx-rab-rel-rx	Indicates the total number of Relocation Command message received by PS Network for RAB Release. Trigger: When Relocation Command message is received by PS Network for RAB Release. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-conv-class-rab-setup-rx	Indicates the total number of Relocation Command message received by PS Network with Conversational Class for RAB Setup. Trigger: When Relocation Command message is received by PS Network with Conversational Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-conv-class-rab-rel-rx	Indicates the total number of Relocation Command message received by PS Network with Conversational Class for RAB Release. Trigger: When Relocation Command message is received by PS Network with Conversational Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-stream-class-rab-setup-rx	Indicates the total number of Relocation Command message received by PS Network with Streaming Class for RAB Setup. Trigger: When Relocation Command message is received by PS Network with Streaming Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32

■ Common Syntax Options

Variables	Description	Data Type
reloc-cmd-stream-class-rab-rel-rx	Indicates the total number of Relocation Command message received by PS Network with Streaming Class for RAB Release. Trigger: When Relocation Command message is received by PS Network with Streaming Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-inter-class-rab-setup-rx	Indicates the total number of Relocation Command message received by PS Network with Interactive Class for RAB Setup. Trigger: When Relocation Command message is received by PS Network with Interactive Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-inter-class-rab-rel-rx	Indicates the total number of Relocation Command message received by PS Network with Interactive Class for RAB Release. Trigger: When Relocation Command message is received by PS Network with Interactive Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-back-class-rab-setup-rx	Indicates the total number of Relocation Command message received by PS Network with Background Class for RAB Setup. Trigger: When Relocation Command message is received by PS Network with Background Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-back-class-rab-rel-rx	Indicates the total number of Relocation Command message received by PS Network with Background Class for RAB Release. Trigger: When Relocation Command message is received by PS Network with Background Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-unkwn-class-rab-setup-rx	Indicates the total number of Relocation Command message received by PS Network with Unknown Class for RAB Setup. Trigger: When Relocation Command message is received by PS Network with Unknown Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
reloc-cmd-unkwn-class-rab-rel-rx	Indicates the total number of Relocation Command message received by PS Network with Unknown Class for RAB Release. Trigger: When Relocation Command message is received by PS Network with Unknown Class for RAB Release. Availability: Across all PS Networks	Unsigned Int32
srns-ctx-req-rx	Indicates the total number of SRNS Context Request message received by PS Network. Trigger: When SRNS Context Request message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32
srns-ctx-rsp-tx	Indicates the total number of SRNS Context Response message transmitted by PS Network. Trigger: When SRNS Context Response message is transmitted by PS Network. Availability: Across all PS Networks	Unsigned Int32
srns-data-fwd-cmd-rx	Indicates the total number of SRNS Data Fwd Command message received by PS Network. Trigger: When SRNS Data Fwd Command message is received by PS Network. Availability: Across all PS Networks	Unsigned Int32

Variables	Description	Data Type
sms-data-fwd-cmd-rx-rab-setup-rx	Indicates the total number of SRNS Data Fwd Command message received by PS Network for RAB Setup. Trigger: When SRNS Data Fwd Command message is received by PS Network for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
sms-conv-class-rab-setup-rx	Indicates the total number of SRNS Data Fwd Command message received by PS Network with Conversational Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is received by PS Network with Conversational Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
sms-stream-class-rab-setup-rx	Indicates the total number of SRNS Data Fwd Command message received by PS Network with Streaming Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is received by PS Network with Streaming Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
sms-inter-class-rab-setup-rx	Indicates the total number of SRNS Data Fwd Command message received by PS Network with Interactive Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is received by PS Network with Interactive Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
sms-back-class-rab-setup-rx	Indicates the total number of SRNS Data Fwd Command message received by PS Network with Background Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is received by PS Network with Background Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32
sms-unkwn-class-rab-setup-rx	Indicates the total number of SRNS Data Fwd Command message received by PS Network with Unknown Class for RAB Setup. Trigger: When SRNS Data Fwd Command message is received by PS Network with Unknown Class for RAB Setup. Availability: Across all PS Networks	Unsigned Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 57

RADIUS Schema Statistics

The RADIUS schema provides operational statistics that can be used for monitoring and troubleshooting RADIUS AAA functionality used by the following products: ASN-GW, GGSN, HA, HSGW, IPSG, P-GW, PDSN

This schema displays information pertaining to RADIUS bulk statistics per server.

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 57. Bulk Statistic Variables in the RADIUS Schema

Variables	Description	Data Type

Variables	Description	Data Type
ipaddr	Description: The IP address of the RADIUS server for which statistics are being collected. The IP address can be specified in IPv4 or IPv6 notation. This is a key variable. Availability: Per AAA group Type: Information	String
port	Description: The UDP port being used for the exchange of RADIUS data. This is a key variable. Availability: Per AAA group Type: Information	Int32
servertype	Description: The type of RADIUS server (authentication or accounting) for which statistics are being collected. This is a key variable. Availability: Per AAA group Type: Information	String
vpnname	Description: The name of the context configured on the system that is currently facilitating the RADIUS server configuration. This is a key variable. Availability: Per system Type: Information	String
vpnid	Description: The identification number of the context configured on the system that is currently facilitating the RADIUS server configuration. This is an internal reference number. This is a key variable. Availability: Per system Type: Information	Int32
group	Description: The RADIUS group name on a per-radius-server basis. This is a key variable. Availability: Per system Type: Information	String
nasipaddr	Description: The RADIUS network access server address. This is a key variable. Availability: Per AAA group Type: Information	String
auth-req-sent	Description: The total number of authentication requests sent to this server. Triggers: Increments when an authentication request is sent to RADIUS server Availability: Per RADIUS server	Int32
auth-req-sentwdmu	Description: The total number of authentication requests sent to this server with a Dynamic Mobile IP Key Update. Triggers: Increments when an authentication request is sent to RADIUS server with DMU attribute Availability: Per RADIUS server	Int32

Variables	Description	Data Type
auth-req-pending	Description: The total number of authentication requests pending for this server. Triggers: Increments whenever a response to the authentication request is pending from the RADIUS server Decrements when an acknowledgement is received for the authentication request from the RADIUS server Availability: Per RADIUS server Type: Gauge	Int32
auth-req-queued	Description: The total number of authentication requests queued for this server. Triggers: Increments when an authentication request is queued for the server Decrements when the authentication request is dequeued and sent to the RADIUS server Availability: Per RADIUS server Type: Gauge	Int32
auth-req-retried	Description: The total number of authentication requests that were re-sent to this server. Triggers: Increments when an authentication request is retried Availability: Per RADIUS server	Int32
auth-req-retriedwdmu	Description: The total number of authentication requests that were re-sent to this server with a Dynamic Mobile IP Key Update. Triggers: Increments when an authentication request with DMU attribute is retried Availability: Per RADIUS server	Int32
auth-chal-rcvd	Description: The total number of authentication access challenges received from this server. Triggers: Increments when an authentication access challenge request is received from RADIUS server Availability: Per RADIUS server	Int32
auth-acc-rcvd	Description: The total number of authentication accept messages received from this server. Triggers: Increments when an authentication accept message is received from RADIUS server Availability: Per RADIUS server	Int32
auth-rej-rcvd	Description: The total number of authentication reject messages received from this server. Triggers: Increments when an authentication reject message is received from RADIUS server Availability: Per RADIUS server	Int32
auth-rej-rcvdwdmu	Description: The total number of authentication reject messages received from this server with a Dynamic Mobile IP Key Update. Triggers: Increments when an authentication reject message is received with DMU attribute Availability: Per RADIUS server	Int32
auth-timeout	Description: The total number of authentication requests for this server that timed-out. Triggers: Increments when an authentication request is timed out for the RADIUS server Availability: Per RADIUS server	Int32
cons-fail	Description: The total number of consecutive authentication/accounting failures that occurred with this server. Triggers: Increments whenever two or more consecutive authentication/accounting requests fail Availability: Per RADIUS server	Int32

Variables	Description	Data Type
auth-cons-fail	Description: The total number of consecutive authentication failures that occurred with this server.  Important: This statistic is obsolete and has been replaced with “cons-fail” statistic.	Int32
auth-rsp-badauth	Description: The total number of AcceptRequest responses received by the system from the server that contains an incorrect Authenticator field, thereby failing message authentication. Triggers: Increments whenever a message authentication fails due to the presence of incorrect Authenticator field in Accept Request response received from the server. Availability: Per RADIUS server	Int32
auth-rsp-malformed	Description: The total number of AcceptRequest responses received by the system from the server that were malformed. Triggers: Increments whenever an Accept Request response from the server is detected to be malformed. Availability: Per RADIUS server	Int32
auth-rsp-malformedattr	Description: The total number of malformed or invalid attributes received in Access-Request response messages. Triggers: Increments whenever a malformed or invalid attribute is received in Access-Request response message. Availability: Per RADIUS server	Int32
auth-rsp-unktype	Description: The total number of AcceptRequest responses received by the system from the server that contained an unknown message type. Triggers: Increments whenever an unknown message type is included in Access-Request response message received from the server. Availability: Per RADIUS server	Int32
auth-rsp-dropped	Description: The total number of authentication responses from this server that were discarded. The message discard can happen due to any of the following reasons - the request being timed out, response arriving late, or request being cancelled due to call disconnection, etc. Triggers: Increments whenever an authentication response message is discarded Availability: Per RADIUS server	Int32
auth-rsp-roundtripusec	Description: Indicates the amount of time it took for the system to receive a valid response from the server for the last authentication request. This is used as a measure to determine how fast the server responds to the authentication request. Triggers: This statistics is updated whenever the system receives a valid response to the last authentication request. Availability: Per RADIUS server Type: Information	Int32
probe-issued	Description: The total number of probe transactions issued to the RADIUS server. Probe is a type of RADIUS test authentication message. Triggers: Increments whenever a probe request is sent to the RADIUS server. Availability: Per RADIUS server	Int32

Variables	Description	Data Type
probe-success	Description: The total number of complete successful probe transactions to the RADIUS server. Triggers: Increments whenever a response is received from the RADIUS server for the probe request sent. Availability: Per RADIUS server	Int32
probe-failed	Description: The total number of failed probe transactions to the RADIUS server. Triggers: Increments whenever a response is not received from the RADIUS server for the probe request sent. Availability: Per RADIUS server	Int32
probe-roundtriptimeusec	Description: The amount of time, in milliseconds, that it took from when a request was sent to and acknowledgement was received from the RADIUS server. Triggers: This statistics is updated when a request was sent to and acknowledgement was received from the RADIUS server. Availability: Per RADIUS server Type: Information	Int32
keepalive-auth-req-sent	Description: The total number of keepalive authentication requests sent. Triggers: Increments whenever a keepalive authentication request is sent to the RADIUS server. Availability: Per RADIUS server	Int32
keepalive-auth-retried	Description: The total number of keepalive authentication requests retried. Triggers: Increments whenever a keepalive authentication request is retried. Availability: Per RADIUS server	Int32
keepalive-auth-timeout	Description: The total number of keepalive authentication requests that timed out. Triggers: Increments whenever a keepalive authentication request is timed out. Availability: Per RADIUS server	Int32
keepalive-auth-acc-rcvd	Description: The total number of keepalive authentication accept requests that were received. Triggers: Increments whenever a keepalive authentication accept request is received. Availability: Per RADIUS server	Int32
keepalive-auth-rej-rcvd	Description: The total number of keepalive authentication rejections that were received. Triggers: Increments whenever a keepalive authentication rejection is received. Availability: Per RADIUS server	Int32
keepalive-auth-rsp-badauth	Description: The total number of keepalive authentication request response messages that failed with a bad authenticator. Triggers: Increments when a keepalive authentication request response message failed with a bad authenticator. Availability: Per RADIUS server	Int32
keepalive-auth-rsp-malformed	Description: The total number of keepalive authentication request response messages that were malformed. Triggers: Increments when a keepalive authentication request response message is detected to be malformed. Availability: Per RADIUS server	Int32

Variables	Description	Data Type
keepalive-auth-rsp-malformedattr	Description: The total number of keepalive authentication request response messages that contained malformed attributes. Triggers: Increments when a malformed attribute is included in the keepalive authentication request response message. Availability: Per RADIUS server	Int32
keepalive-auth-rsp-unktype	Description: The total number of keepalive authentication request response messages that failed with an unknown message type. Triggers: Increments when a keepalive authentication request response message failed with an unknown message type. Availability: Per RADIUS server	Int32
keepalive-auth-rsp-dropped	Description: The total number of keepalive authentication request response messages that were dropped. Triggers: Increments when a keepalive authentication request response message is dropped. Availability: Per RADIUS server	Int32
acc-req-sent	Description: The total number of accounting requests sent to this server. Triggers: Increments when an accounting request is sent to the RADIUS server. Availability: Per RADIUS server	Int32
acc-req-pending	Description: The total number of accounting requests pending for this server. Triggers: Increments when an accounting request is pending for the RADIUS server. Availability: Per RADIUS server	Int32
acc-req-queued	Description: The total number of accounting requests queued for this server. Triggers: Increments when an accounting request is queued for the RADIUS server. Availability: Per RADIUS server	Int32
acc-req-retried	Description: The total number of accounting requests that were re-sent to this server. Triggers: Increments when an accounting request is re-sent to the RADIUS server. Availability: Per RADIUS server	Int32
acc-rsp-rcvd	Description: The total number of accounting responses received from this server. Triggers: Increments when an accounting response is received from the RADIUS server. Availability: Per RADIUS server	Int32
acc-req-timeout	Description: The total number of accounting requests for this server that timed-out. Triggers: Increments when an accounting request is timed out. Availability: Per RADIUS server	Int32
acc-req-cons-fail	Description: The total number of consecutive accounting failures that occurred with this server.  Important: This statistic is obsolete and has been replaced with “cons-fail” statistic.	Int32
acc-rsp-badresp	Description: The total number of Accounting Responses received by the system from the server that contained an incorrect Authenticator field, thereby failing message. Triggers: Increments whenever a message accounting fails due to the presence of incorrect Authenticator field in Accounting response received from the server. Availability: Per RADIUS server	Int32

Variables	Description	Data Type
acc-rsp-malformed	Description: The total number of Accounting Responses received by the system from the server that were malformed. Triggers: Increments whenever an Accounting Response from the server is detected to be malformed. Availability: Per RADIUS server	Int32
acc-rsp-unktype	Description: The total number of Accounting Responses received by the system from the server that contained an unknown message type. Triggers: Increments whenever an unknown message type is included in Accounting Response message received from the server. Availability: Per RADIUS server	Int32
acc-rsp-dropped	Description: The total number of Accounting Responses from the server that were discarded. Triggers: Increments whenever an Accounting Response message is discarded Availability: Per RADIUS server	Int32
acc-rsp-roundtripusec	Description: Indicates the amount of time it took for the system to receive a valid response from the server for the last accounting request. Triggers: This statistics is updated whenever the system receives a valid response to the last accounting request. Availability: Per RADIUS server Type: Information	Int32
acc-start-sent	Description: The total number of accounting start messages sent. Triggers: Increments whenever an accounting start message is sent Availability: Per RADIUS server	Int32
acc-stop-sent	Description: The total number of accounting stop messages sent. Triggers: Increments whenever an accounting stop message is sent Availability: Per RADIUS server	Int32
acc-interim-sent	Description: The total number of interim accounting messages sent. Triggers: Increments whenever an interim accounting message is sent Availability: Per RADIUS server	Int32
acc-on-sent	Description: The total number of accounting ON messages sent. Triggers: Increments whenever an accounting ON message is sent Availability: Per RADIUS server	Int32
acc-off-sent	Description: The total number of accounting OFF messages sent. Triggers: Increments whenever an accounting OFF message is sent Availability: Per RADIUS server	Int32
acc-start-retries	Description: The total number of accounting start retry messages sent. Triggers: Increments whenever an accounting start message is retried Availability: Per RADIUS server	Int32
acc-stop-retries	Description: The total number of accounting stop retry messages sent. Triggers: Increments whenever an accounting stop message is retried Availability: Per RADIUS server	Int32
acc-interim-retries	Description: The total number of interim accounting retry messages sent. Triggers: Increments whenever an interim accounting message is retried Availability: Per RADIUS server	Int32

Variables	Description	Data Type
acc-on-retries	Description: The total number of accounting ON retry messages sent. Triggers: Increments whenever an accounting ON message is retried Availability: Per RADIUS server	Int32
acc-off-retries	Description: The total number of accounting OFF retry messages sent. Triggers: Increments whenever an accounting OFF message is retried Availability: Per RADIUS server	Int32
acc-ttl-g1	Description: The total number of accounted bytes as user input. Triggers: Increments based on the input byte value of accounting messages Availability: Per RADIUS server	Int64
acc-ttl-g2	Description: The total number of accounted bytes outputted to user. Triggers: Increments based on the output byte value of accounting messages Availability: Per RADIUS server	Int64
keepalive-acct-req-sent	Description: The total number of keepalive accounting request messages sent. Triggers: Increments whenever a keepalive accounting request message is sent Availability: Per RADIUS server	Int32
keepalive-acct-retried	Description: The total number of keepalive accounting messages retried. Triggers: Increments whenever a keepalive accounting request message is retried Availability: Per RADIUS server	Int32
keepalive-acct-success	Description: The total number of successful keepalive accounting messages. Triggers: Increments whenever a keepalive accounting request message is successful. Availability: Per RADIUS server	Int32
keepalive-acct-timeout	Description: The total number of keepalive accounting timeout messages. Triggers: Increments whenever a keepalive accounting request message is timed out. Availability: Per RADIUS server	Int32
keepalive-acct-rsp-badauth	Description: The total number of keepalive accounting request response messages that failed with a bad authenticator. Triggers: Increments whenever a message accounting fails due to the presence of incorrect Authenticator field in keepalive accounting request response message received from the server. Availability: Per RADIUS server	Int32
keepalive-acct-rsp-malformed	Description: The total number of keepalive accounting request response messages that were malformed. Triggers: Increments whenever a keepalive accounting request response message is detected to be malformed. Availability: Per RADIUS server	Int32
keepalive-acct-rsp-unktype	Description: The total number of keepalive accounting request response messages that failed with an unknown type. Triggers: Increments whenever an unknown message type is included in keepalive accounting request response message received from the server. Availability: Per RADIUS server	Int32
keepalive-acct-rsp-dropped	Description: The total number of keepalive accounting request response messages that were dropped. Triggers: Increments whenever a keepalive accounting request response message is discarded Availability: Per RADIUS server	Int32

Variables	Description	Data Type
online-acc-req-sent	Description: The total number of Online Access Request messages sent. Triggers: Increments whenever an Online Access Request message is sent. Availability: Per RADIUS server	Int32
online-acc-req-pending	Description: The total number of Online Access Request messages pending. Triggers: Increments whenever an Online Access Request message is pending for the RADIUS server. Availability: Per RADIUS server	Int32
online-acc-req-retried	Description: The total number of Online Access Request messages retried. Triggers: Increments whenever an Online Access Request message is retried. Availability: Per RADIUS server	Int32
online-acc-rsp-rcvd	Description: The total number of Online Access Accept messages received. Triggers: Increments whenever an Online Access Accept message is received. Availability: Per RADIUS server	Int32
online-acc-rej-rcvd	Description: The total number of Online Access Reject messages received. Triggers: Increments whenever an Online Access Reject message is received. Availability: Per RADIUS server	Int32
online-acc-req-timeout	Description: The total number of Online Access Request message timeouts. Triggers: Increments whenever an Online Access Request message is timed out. Availability: Per RADIUS server	Int32
online-acc-rsp-badauth	Description: The total number of Online Access Request messages that failed with a bad authenticator. Triggers: Increments whenever a message accounting fails due to the presence of incorrect Authenticator field in Online Access Request message. Availability: Per RADIUS server	Int32
online-acc-rsp-malformed	Description: The total number of Online Access Request Response messages that were malformed. Triggers: Increments whenever an Online Access Request Response message from the server is detected to be malformed. Availability: Per RADIUS server	Int32
online-acc-rsp-malformedattr	Description: The total number of Online Access Request Response messages that contained a malformed attribute. Triggers: Increments whenever a malformed or invalid attribute is received in Online Access Request Response message. Availability: Per RADIUS server	Int32
online-acc-rsp-unktype	Description: The total number of Online Access Request Response messages that are of an unknown type. Triggers: Increments whenever an unknown message type is included in Online Access Request Response message received from the server. Availability: Per RADIUS server	Int32
online-acc-badmmsgauth	Description: The total number of Online Access Request Response messages that contained a bad message authenticator. Triggers: Increments whenever an Online Access Request Response message contains a bad message authenticator. Availability: Per RADIUS server	Int32

Variables	Description	Data Type
online-acc-nomsgauth	Description: The total number of Online Access Request Response messages that contained no message authenticator. Triggers: Increments whenever an Online Access Request Response message does not contain any message authenticator. Availability: Per RADIUS server	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 58

RP Schema Statistics

The RP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: HSGW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 58. Bulk Statistic Variables in the RP Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the PDSN service. This is a key variable.	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the PDSN service. This is an internal reference number. This is a key variable.	Int32
servname	Displays the name of the PDSN service for which the statistics are displayed. This is a key variable.	String
num-sessions	The current total number of RP sessions	Int32
sess-cursetup	The total number of current sessions per service.	Int32
sess-currevasetup	The total number of current EVDO-Rev A sessions per service.	Int32
sess-ttlsetup	The total sessions setup per service.	Int32
sess-ttlrevasetup	The total EVDO-Rev A sessions setup per service.	Int32
sess-ttlrevasreleased	The total EVDO-Rev A sessions released per service.	Int32
sess-ttlrevadowngrade	The total EVDO-Rev A sessions that were downgraded per service.	Int32
sess-ttlreleased	The total number of sessions released per service.	Int32
svctype	Indicates the type of services running for this schema. It is collected at the per service level.	String
a10-cursetup	The total number of current A10s per service.	Int32
a10aux-cursetup	The total number of current aux A10s per service.	Int32
a10main-cursetup	The total number of current main A10s per service.	Int32
a10-ttlsetup	The total number of A10s setup per service.	Int32
a10aux-ttlsetup	The total number of aux A10s setup per service.	Int32
a10main-ttlsetup	The total number of main a10s setup per service.	Int32
a10-ttlreleased	The total number of a10s released per service.	Int32
a10aux-ttlreleased	The total number of aux A10s released per service.	Int32
a10main-ttlreleased	The total number of main A10s released per service.	Int32
sess-release-dereg	The total number of sessions de-registered per service.	Int32
sess-release-expiry	The total number of sessions released due to lifetime expiry per service.	Int32
sess-release-ppplayer	The total number of sessions released due to a PPP Layer command reported per service.	Int32
sess-release-pcfmonfail	The total number of sessions released due to a PCF Monitor failure reported per service.	Int32
sess-release-grekey	The total number of sessions released due to a GRE Key Mismatch reported per service.	Int32
sess-release-purged	The total number of sessions released due to inconsistencies found during audits between the A11 Manager task and the Session Manager task. When an inconsistency is identified, the session is released and accounting stops are issued.	Int32
sess-release-other	The total number of sessions released due to other reasons reported per service.	Int32
recv-total	The total number of registration requests, renewals, and de-registrations received.	Int32

Variables	Description	Data Type
accept-total	The total number of registration requests that have been accepted.	Int32
denied-total	The total number of registration requests that have been rejected.	Int32
reply-total	The total number of registration replies sent.	Int32
discard-total	The total number of registration requests that have been discarded.	Int32
accept-initial	The total number of initial registration requests received and accepted.	Int32
recv-initial	The total number of initial registration requests received.	Int32
accept-intrapdsn	The total number of registration requests received for sessions going through an intra-PDSN handoff.  Important: This statistic is provided for compatibility only. Please use the accept-active-intrapdsn statistic.	Int32
accept-active-intrapdsn	The total number of registration requests received with ACTIVE START for an intra-PDSN handoff.	Int32
accept-dormant-intrapdsn	The total number of registration requests received with ACTIVE STOP for an intra-PDSN handoff.	Int32
accept-interpdsn	The total number of registration requests received for sessions going through an inter-PDSN handoff.	Int32
reva-rrq-recv	The total number of Rev-A RRQs received per service.	Int32
reva-rrq-accept	The total number of Rev-A RRQs accepted per service.	Int32
reva-rrq-denied	The total number of Rev-A RRQs denied per service.	Int32
reva-rrq-reply	The total number of Rev-A RRQs per service that were replied to.	Int32
denied-initial	The total number of initial registration requests received and rejected.	Int32
discard-initial	The total number of Initial RRQ discarded.	Int32
recv-initial-setupstart	The total number of Initial Setup/Start RRQ received.	Int32
accept-initial-setupstart	The total number of Initial Setup/Start RRQ received and accepted.	Int32
denied-initial-setupstart	The total number of Initial Setup/Start RRQ received and denied.	Int32
discard-initial-setupstart	The total number of initial start or setup registration requests that have been received and discarded.	Int32
accept-renew	The total number of registration request renewals received and accepted.	Int32
denied-renew	The total number of registration request renewals received and rejected.	Int32
recv-renew	The total number of registration request renewals received.	Int32
discard-renew	The total number of registration request renewals received and discarded	Int32
recv-renew-noairlink	The total number of registration request renewals received due to “No airlink”.	Int32

Variables	Description	Data Type
accept-renew-noairlink	The total number of registration request renewals received due to “No airlink” and accepted.	Int32
denied-renew-noairlink	The total number of registration request renewals received due to “No airlink” and denied.	Int32
discard-renew-noairlink	The total number of registration request renewals received due to “No airlink” and discarded.	Int32
active-start-renew	The total number of ACTIVE START registration request renewals received.  Important: This statistic is provided for compatibility only. Please use the accept-renew-activestart statistic.	Int32
recv-renew-activestart	The total number of RRQ renewals with an Active Start record received.	Int32
accept-renew-activestart	The total number of RRQ renewals with an Active Start record received and accepted.	Int32
denied-renew-activestart	The total number of RRQ renewals with an Active Start record received and denied.	Int32
discard-renew-activestart	The total number of RRQ renewals with an Active Start record received and discarded.	Int32
active-stop-renew	The total number of ACTIVE STOP registration request renewals received.  Important: This statistic is provided for compatibility only. Please use the accept-renew-activestop statistic.	Int32
recv-renew-activestop	The total number of RRQ renewals with an Active Stop record received.	Int32
accept-renew-activestop	The total number of RRQ renewals with an Active Stop record received and accepted.	Int32
denied-renew-activestop	The total number of RRQ renewals with an Active Stop record received and denied.	Int32
discard-renew-activestop	The total number of RRQ renewals with an Active Stop record received and discarded.	Int32
accept-dereg	The total number of de-registration requests received and accepted.	Int32
denied-dereg	The total number of de-registration request renewals received and rejected.	Int32
recv-dereg	The total number of de-registration request renewals received.	Int32
discard-dereg	The the total number of de-registration requests received and discarded.	Int32
recv-dereg-noactivestop	The total number of de-registration requests with a No Active Stop record received.	Int32
accept-dereg-noactivestop	The total number of de-registration requests with a No Active Stop record received and accepted.	Int32
denied-dereg-noactivestop	The total number of de-registration requests with a No Active Stop record received and denied	Int32
discard-dereg-noactivestop	The total number of de-registration requests with a No Active Stop record received and discarded.	Int32

Variables	Description	Data Type
active-stop-dereg	The total number of ACTIVE STOP de-registration request renewals received and accepted.  Important: This statistic is provided for compatibility only. Please use the <u>accept-dereg-activestop</u> statistic.	Int32
recv-dereg-activestop	The the total number of de-registration request with an Active Stop record received.	Int32
accept-dereg-activestop	The the total number of de-registration request with an Active Stop record received and accepted.	Int32
denied-dereg-activestop	The the total number of de-registration request with an Active Stop record received and denied.	Int32
discard-dereg-activestop	The the total number of de-registration request with an Active Stop record received and discarded.	Int32
recv-intrapdsn-activeanidhandoff	The total number of intra PDSN handoffRRQs with active Access Network Identifier (ANID) received.	Int32
accept-intrapdsn-activeanidhandoff	The total number of intra PDSN handoffRRQs with active ANID received and accepted.	Int32
denied-intrapdsn-activeanidhandoff	The total number of intra PDSN handoffRRQs with active ANID received and denied.	Int32
discard-intrapdsn-activeanidhandoff	The total number of intra PDSN handoffRRQs with active ANID received and discarded.	Int32
recv-intrapdsn-dormantanidhandoff	The total number of intra PDSN handoffRRQs with dormant ANID received.	Int32
accept-intrapdsn-dormantanidhandoff	The total number of intra PDSN handoffRRQs with dormant ANID received and accepted.	Int32
denied-intrapdsn-dormantanidhandoff	The total number of intra PDSN handoffRRQs with dormant ANID received and denied.	Int32
discard-intrapdsn-dormantanidhandoff	The total number of intra PDSN handoffRRQs with dormant ANID received and discarded.	Int32
recv-interpdsn-activemeianidhandoff	The total number of inter PDSN handoffRRQs with active Mobility Event Indicator (MEI) and ANID received.	Int32
accept-interpdsn-activemeianidhandoff	The total number of inter PDSN handoffRRQs with active MEI and ANID received and accepted.	Int32
denied-interpdsn-activemeianidhandoff	The total number of inter PDSN handoffRRQs with active MEI and ANID received and denied.	Int32
discard-interpdsn-activemeianidhandoff	The total number of inter PDSN handoffRRQs with active MEI and ANID received and discarded.	Int32
send-error	The total number of registration replies for which errors were experienced during transmission.	Int32
hash-error	The total number of registration requests that had internal hash lookup errors.	Int32

Variables	Description	Data Type
decode-error	The total number of registration requests that had decode errors.	Int32
unhandled	The total number of registration requests that had unhandled errors.	Int32
seqerror	The total number of registration requests that had sequence numbers that were not acceptable.	Int32
deny-unspec	The total number of registration requests that were denied using reply code of 80H (Registration Denied - reason unspecified)	Int32
deny-adminprohib	The total number of registration requests that were denied using reply code of 81H (Registration Denied - administratively prohibited).	Int32
deny-noresource	The total number of registration requests that were denied using reply code of 82H (Registration Denied - insufficient resources).	Int32
deny-auth	The total number of registration requests that were denied using reply code of 83H (Registration Denied - mobile node failed authentication).	Int32
deny-idmismatch	The total number of registration requests that were denied using reply code of 85H (Registration Denied - identification mismatch).	Int32
deny-badrequest	The total number of registration requests that were denied using reply code of 86H (Registration Denied - poorly formed request).	Int32
deny-unknownpdsn	The total number of registration requests that were denied using reply code of 88H (Registration Denied - unknown PDSN address)	Int32
deny-revtununavail	The total number of registration requests that were denied using reply code of 89H (Registration Denied - requested reverse tunnel unavailable).	Int32
deny-revtunreq	The total number of registration requests that were denied using reply code of 8AH (Registration Denied - reverse tunnel is mandatory and "T"-bit not set).	Int32
deny-unrecogvend	The total number of registration requests that were denied using reply code of 8DH (Registration Denied - unsupported vendor ID or unable to interpret data in the CVSE).	Int32
deny-sessclosed	The total number of registration requests that were denied using an error code 0x8E for absent RP sessions. Refer to the session-already-closed keyword for the registration-deny command in the PDSN Configuration Mode chapter of the Command Line Interface Reference for additional information.	Int32
deny-bsninfo	The total number of registration requests that were denied because BSN information was unavailable.	Int32
deny-noresource-nosessmgr	The total number of RRRQ denied due to Insufficient resource, no session manager reported per service.	Int32
deny-noresource-nomem	The total number of RRRQ denied due to Insufficient resource, no memory reported per service.	Int32
deny-noresource-sessmgrretrieved	The total number of RRRQ denied due to Insufficient resource, session managers retrieved reported per service.	Int32
deny-noresource-inputq	The total number of RRRQ denied due to Insufficient resource, input queue exceeded reported per service.	Int32

Variables	Description	Data Type
deny-noresource-policy	The total number of RRQ denied due to Insufficient resource, policy rejected reported per service.	Int32
deny-noresource-sessmgrrej	The total number of RRQ denied due to Insufficient resource, session manager rejected reported per service.	Int32
deny-noresource-allmgrrej	The total number of RRQ denied due to Insufficient resource, All manager rejected reported per service.	Int32
deny-badrequest-alrdorm	The total number of RRQ denied due to poorly formed request, session already dormant reported per service.	Int32
deny-badrequest-alractive	The total number of RRQ denied due to poorly formed request, already active reported per service.	Int32
deny-badrequest-setupabsent	The total number of RRQ denied due to poorly formed request, airlink setup absent reported per service.	Int32
deny-badrequest-miscoaaddr	The total number of RRQ denied due to poorly formed request, mismatched CoA/Source address reported per service.	Int32
deny-badrequest-pkttoshort	The total number of RRQ denied due to poorly formed request, packet too short reported per service.	Int32
deny-badrequest-pktoolong	The total number of RRQ denied due to poorly formed request, packet too long reported per service.	Int32
deny-badrequest-fieldlen	The total number of RRQ denied due to poorly formed request, invalid field length reported per service.	Int32
deny-badrequest-flags	The total number of RRQ denied due to poorly formed request, invalid flags reported per service.	Int32
deny-badrequest-hoanonzero	The total number of RRQ denied due to poorly formed request, HOA non-zero reported per service.	Int32
deny-badrequest-sse	The total number of RRQ denied due to poorly formed request, invalid SSE reported per service.	Int32
deny-badrequest-vse	The total number of RRQ denied due to poorly formed request, invalid VSE reported per service.	Int32
deny-badrequest-authextn	The total number of RRQ denied due to poorly formed request, invalid authorization extension reported per service.	Int32
deny-badrequest-unkextn	The total number of RRQ denied due to poorly formed request, invalid unknown extension reported per service.	Int32
deny-badrequest-other	The total number of RRQ denied due to poorly formed request, other reason reported per service.	Int32
deny-unspec-nullpkt	The total number of RRQ denied due to unspecified reason, null packet received reported per service.	Int32
deny-unspec-lifzero	The total number of RRQ denied due to unspecified reason, lifetime zero in initial RRQ reported per service.	Int32

Variables	Description	Data Type
deny-unspec-notready	The total number of RRRQ denied due to unspecified reason, session manager not ready reported per service.	Int32
deny-unspec-crphandoff	The total number of RRRQ denied due to unspecified reason, Closed RP handoff in progress reported per service.	Int32
deny-unspec-noairlink	The total number of RRRQ denied due to unspecified reason, no airlink setup reported per service.	Int32
deny-unspec-intrahandoff	The total number of RRRQ Denied due to unspecified reason, intra PDSN handoff triggered reported per service.	Int32
deny-cong-drop	The total number of denied registration replies discarded due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information.	Int32
deny-cong-adminprohib	The total number of denied registration replies that were sent with a reply code of 81H (Registration Denied - administratively prohibited) due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information.	Int32
deny-cong-unknownpdsn	The total number of denied registration replies that were sent with a reply code of 88H (Registration Denied - unknown PDSN address) due to congestion. Refer to the Configuring Congestion Control chapter of this guide for additional information.	Int32
upd-total	The total number of registration updates that were transmitted.	Int32
upd-accept	The total number of registration updates that were accepted by the PCF.	Int32
upd-denied	The total number of registration updates that were denied.	Int32
upd-unack	The total number of registration updates that were not acknowledged.	Int32
upd-trans	The total number of initial registration updates that were transmitted.	Int32
upd-ttlnoetrans	The total number of registration updates that were not re-transmitted due to TTL expiration.	Int32
upd-retrans	The total number of registration updates that were re-transmitted.	Int32
upd-received	The total number of registration acknowledgements that were received.	Int32
upd-ack-received	The total number of registration acknowledgements that were received.	Int32
upd-discard	The total number of registration acknowledgements that were discarded.	Int32
upd-senderror	The total number of registration updates for which errors were experienced during transmission.	Int32
upd-upltrinit	The total number of registration updates that were initiated by upper processing layers.  Important: This statistic is obsolete.	Int32
upd-uplyrinit	The total number of registration updates that were initiated by upper processing layers.  Important: This statistic is obsolete.	Int32

Variables	Description	Data Type
upd-other	The total number of registration updates that were sent due to reasons other than those listed here.	Int32
upd-handoff	The number of registration updates that were sent due to handoff releases.	Int32
upd-lifetime	The total number of registration updates that the send reason was Lifetime Expiry reported per service.	Int32
upd-smgexit	The total number of registration updates that the send reason was that the session manager exited reported per service.	Int32
upddeny-unspec	The total number of denied registration updates that were sent with a reply code of 80H (Registration Denied - reason unspecified).	Int32
upddeny-adminprohib	The total number of denied registration updates that were sent with a reply code of 81H (Registration Denied - administratively prohibited).	Int32
upddeny-auth	The total number of denied registration updates that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication).	Int32
upddeny-idmismatch	The total number of denied registration updates that were sent with a reply code of 85H (Registration Denied - identification mismatch).	Int32
upddeny-badrequest	The total number of denied registration updates that were sent with a reply code of 86H (Registration Denied - poorly formed request).	Int32
upd-discard-absent	The total number of registration acknowledgements that were discarded due to the session having been already ended because the acknowledgement was late.	Int32
upd-discard-nomem	The total number of registration acknowledgements that were discarded due to insufficient memory.	Int32
upd-discard-malform	The total number of registration acknowledgements that were discarded due to being poorly formed.	Int32
upd-discard-authfail	The total number of registration acknowledgements that were discarded due to the mobile node failing authentication.	Int32
upd-discard-bounce	The total number of internal communication messages between an A11 Manager task and a Session Manager task that bounced (were not successfully sent).	Int32
upd-discard-inputq	The number of times that the queue in which incoming calls are kept prior to being processed exceeded its capacity.	Int32
upd-discard-mismatchid	The total number of discarded registration acknowledgements due to reply code 85H (Registration Denied - identification mismatch).	Int32
upd-discard-invpktn	The total number of registration acknowledgements that were discarded due to having an invalid packet length.	Int32
upd-discard-unkpcf	The total number of registration acknowledgements that were discarded due to Unknown PCF.	Int32
upd-discard-unhpktn	The total number of registration acknowledgements that were discarded due to Unhandled Packet.	Int32
upd-discard-misc	The number of registration acknowledgements that were discarded due to reasons other than those listed above.	Int32

Variables	Description	Data Type
disc-absent	 Important: This statistic has been renamed to upd-discard-absent. However, this statistic name is still provided for compatibility only.	Int32
disc-nomem	 Important: This statistic has been renamed to upd-discard-nomem. However, this statistic name is still provided for compatibility only.	Int32
disc-malform	 Important: This statistic has been renamed to upd-discard-malform. However, this statistic name is still provided for compatibility only.	Int32
disc-authfail	 Important: This statistic has been renamed to upd-discard-authfail. However, this statistic name is still provided for compatibility only.	Int32
disc-bounce	 Important: This statistic has been renamed to upd-discard-bounce. However, this statistic name is still provided for compatibility only.	Int32
disc-inputq	 Important: This statistic has been renamed to upd-discard-inputq. However, this statistic name is still provided for compatibility only.	Int32
disc-mismatchid	 Important: This statistic has been renamed to upd-discard-mismatchid. However, this statistic name is still provided for compatibility only.	Int32
disc-invpktn	 Important: This statistic has been renamed to upd-discard-invpktn. However, this statistic name is still provided for compatibility only.	Int32
disc-misc	 Important: This statistic has been renamed to upd-discard-misc. However, this statistic name is still provided for compatibility only.	Int32

Variables	Description	Data Type
sec-violations	The total number of security violations that occurred.	Int32
sec-badauth	The total number of security violations that occurred due to a mis-computed authentication field.	Int32
sec-badid	The total number of security violations that occurred due to the receipt of a Security Parameter Index (SPI) that is not configured on the PDSN.	Int32
sec-badspi	The total number of security violations that occurred due to the receipt of a Security Parameter Index (SPI) that was in the reserved range (0 through 255).	Int32
sec-mnhaauth	The total number of security violations that occurred due to missing mobile node-home agent authentication extensions.	Int32
sec-regupdate	The total number of security violations that occurred due to missing registration update authentication extensions	Int32
rrqdiscard-nosessmgr	The total number of registration requests discarded due to no session manager, reported per service.	Int32
rrqdiscard-nomem	The total number of registration requests discarded due to no memory, reported per service.	Int32
rrqdiscard-authfail	The total number of registration requests discarded due to auth failure, reported per service.	Int32
rrqdiscard-smgrdead	The total number of registration requests discarded due to session manager dead, reported per service.	Int32
rrqdiscard-adminprohib	The total number of registration requests discarded due to admin prohibited, reported per service.	Int32
rrqdiscard-smgrnotready	The total number of registration requests discarded due to session manager not ready, reported per service.	Int32
rrqdiscard-unkpdsn	The total number of registration requests discarded due to unknown pdsn, reported per service.	Int32
rrqdiscard-bounce	The total number of registration requests discarded due to internal bounce error, reported per service.	Int32
rrqdiscard-inputq	The total number of registration requests discarded due to input queue exceeded, reported per service.	Int32
rrqdiscard-maxsess	The total number of registration requests discarded due to max sessions reached, reported per service.	Int32
rrqdiscard-invlcn	The total number of registration requests discarded due to invalid packet length, reported per service.	Int32
rrqdiscard-grekey	The total number of registration requests discarded due to GRE key changed, reported per service.	Int32
rrqdiscard-overload	The total number of registration requests discarded due to overload/congestion, reported per service.	Int32
rrqdiscard-misc	The total number of registration requests discarded due to miscellaneous errors reported per service.	Int32
ttlprepaid	The total number of Prepaid calls facilitated by the service.	Int32

Variables	Description	Data Type
curprepaid	The total number of Prepaid calls currently being facilitated by the service.	Int32
ttlonlineauthsucc	The total number of successful Online Authentications for the service.	Int32
ttlonlineauthfail	The total number of successful Online Authentications for the service.	Int32
rx-pkt-xoff	The total number of packets Received with XOFF per service.	Int32
rx-pkt-xon	The total number of packets Received with XON per Service.	Int32
xontoxoff	The total number of XON->XOFF transitions per service.	Int32
pkt-dropped-xoff	The total number of output packets dropped to XOFF per service.	Int32
bytes-dropped-xoff	The total number of output bytes dropped on XOFF per Service.	Int32
sess-num-transmitted	The total number of RP session update messages transmitted.	Int32
sess-accepted	The total number of RP session update ack messages accepted.	Int32
sess-denied	The total number of RP session update messages denied.	Int32
sess-not-acknowledged	The total number of RP session update messages not acknowledged.	Int32
sess-initial-update	The total number of RP session update messages initially transmitted.	Int32
sess-update-retransmitted	The total number of RP session update messages re-transmitted.	Int32
sess-update-ack-received	The total number of RP session update acknowledgement messages received.	Int32
sess-update-ack-discarded	The total number of RP session update acknowledgement messages discarded.	Int32
sess-update-send-error	The total number of RP session update send errors that occurred.	Int32
sess-updreason-alwayson	The total number of session updates sent due to Always On, reported per service. This is a Rev-A specific statistic.	Int32
sess-updreason-qosinfo	The total number of session updates sent due to QoS Info, reported per service.	Int32
sess-updreason-qostftviol	The total number of session updates sent due to TFT Violation, reported per service.	Int32
sess-updreason-qostrafviol	The total number of session updates sent due to Traffic Violation, reported per service.	Int32
sess-updreason-qostrafpol	The total number of session updates sent due to Traffic Policing, reported per service.	Int32
sess-updreason-qosoptrig	The total number of session updates sent due to Operator Triggered, reported per service.	Int32
sess-always-on-indication	The total number of RP session updates supporting Always-on functionality.	Int32
sess-reason-unspecified	The total number of RP session update messages denied with status code reason-unspecified.	Int32

Variables	Description	Data Type
sess-PDSN-auth-fail	The total number of RP session update messages denied due to message authentication failure at the PCF.  Important: This statistic is provided for compatibility only. Please use the <u>sess-pdsn-auth-fail</u> statistic.	Int32
sess-pdsn-auth-fail	The total number of RP session update messages denied due to message authentication failure at the PCF.	Int32
sess-ID-mismatch	The total number of RP session update messages denied due to having an ID mismatch at the PCF.  Important: This statistic is provided for compatibility only. Please use the <u>sess-id-mismatch</u> statistic.	Int32
sess-id-mismatch	The total number of RP session update messages denied due to having an ID mismatch at the PCF.	Int32
sess-poorly-formed-update	The total number of session update messages denied by the PCF due to poorly formed message error.	Int32
sess-para-not-update	The total number of update ack messages received with status code indicating that parameters were not updated.	Int32
sess-upddenied-noresource	The total number of session updates sent due to Insufficient Resources, reported per service.	Int32
sess-upddenied-adminprohib	The total number of session updates denied due to Admin Prohibited, reported per service.	Int32
sess-upddenied-idnotsupp	The total number of session updates denied due to Profile ID Not Supported, reported per service.	Int32
sess-upddenied-handoff	The total number of session updates denied due to handoffs in progress per service.	Int32
sess-absent	The total number of update ack messages that were discarded by the PDSN due to no session being present at the PDSN.	Int32
sess-no-memory	The total number of update ack messages that were discarded by the PDSN due to no memory available.	Int32
sess-malformed	The total number of update ack messages that were discarded by the PDSN due to being malformed.	Int32
sess-auth-fail	The total number of update ack messages that were discarded by the PDSN due to message authentication failure.	Int32
sess-ID-bounce-error	The total number of update ack messages that were discarded by the PDSN due to internal communication error within the PDSN.	Int32
sess-input-Q-exceeded	The total number of update ack messages that were discarded by the PDSN due to exceeding input pacing queues at the PDSN.	Int32

Variables	Description	Data Type
sess-mismatched-ID	The total number of updateack messages that were discarded by the PDSN due to mismatched id in the message.	Int32
sess-invalid-packet-length	The total number of updateack messages that were discarded by the PDSN due to bad packet length.	Int32
sess-misc-reasons	The total number of updateack messages that were discarded by the PDSN due to other reasons.	Int32
sess-updackdisc-sessdisc	Session Update Ack Discard Reasons – Session Disconnecting per service.	Int32
sess-updackdisc-pktnothand	Session Update Ack Discard Reasons – Packet Not Handled per service.	Int32
sess-gre-packet-sent-sdb	The total number of GRE packets transmitted in short data burst (SDB).	Int32
sess-gre-byte-sent-sdb	The total number of GRE bytes transmitted in short data burst (SDB).	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 59

SCCP Schema Statistics

The SCCP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: SGSN

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 59. Bulk Statistic Variables in the SCCP Service Schema

Variables	Description	Data Type

Variables	Description	Data Type
ssa-txed	Description: Total number of Subsystem Allowed (SSA) messages sent by Signalling Connection Control Part (SCCP) function to the peer destination Triggers: Increments when the SCCP subsystem becomes available (SCCP function is not prohibited or unavailable) and SCCP function sends an SSA message to inform the peer destination. Availability: per VPN context Type: Counter	Int32
ss-oos-grant-txed	Description: Total number of Subsystem-Out-of-Service-Grant (SOG) messages sent by the SCCP function. SOG is sent as a reply by the SCCP when it receives and accepts a Subsystem-Out-of-Service-Request (SOR) message from the peer SCCP. Triggers: Increments when a SOG message is sent, in reply to a SOR message, to the requesting SCCP. Availability: per VPN context Type: Counter	Int32
ss-oos-req-txed	Description: Total number of Subsystem-Out-of-Service-Request (SOR) messages sent by the SCCP function, to the peer SCCP, to inform the peer that the requesting SCCP wishes to go out-of-service. Triggers: Increments when the SCCP wishes to go out-of-service and sends a SOR. Availability: per VPN context Type: Counter	Int32
ssp-txed	Description: Total number of Subsystem-Prohibited (SSP) messages sent by the SCCP function, to the peer SCCP subsystem, to inform the peer SCCP that the originating SCCP is not available. Triggers: Increments when the local SCCP is unavailable and sends an SSP message. Availability: per VPN context Type: Counter	Int32
ss-status-test-txed	Description: Total number of Subsystem-Status-Test messages (SST) sent by the local SCCP, to the peer SCCP subsystem, to verify the status of the marked peer. Triggers: Increments when the local SCCP sends SST to verify the peer's availability Availability: per VPN context Type: Counter	Int32
ssa-rcvd	Description: Total number of Subsystem-Allowed (SSA) messages received, by the local Signalling Connection Control Part (SCCP) function, from the peer SCCP. Triggers: Increments when the local SCCP receives SSA to verify the peer's availability Availability: per VPN context Type: Counter	Int32
ss-oos-grant-rcvd	Description: Total number of Subsystem-Out-of-Service-Grant (SOG) messages received by the SCCP. Triggers: Increments when the local SCCP accepts a Subsystem-Out-of-Service-Request (SOR). Availability: per VPN context Type: Counter	Int32

Variables	Description	Data Type
ss-oos-req-rcvd	Description: Total number of Subsystem-Out-of-Service-Request (SOR) messages received by the local SCCP. Triggers: Increments when the local SCCP receives a Subsystem-Out-of-Service-Request (SOR) message. Availability: per VPN context Type: Counter	Int32
ss-prohibit-rcvd	Description: Total number of Subsystem-Prohibited (SSP) messages received by the local SCCP. Triggers: Increments when the local SCCP receives an SSP message. Availability: per VPN context Type: Counter	Int32
ss-status-test-rcvd	Description: Total number of Subsystem Status Test (SST) messages received by the local SCCP. Triggers: Increments when the local SCCP receives an SST message. Availability: per VPN context Type: Counter	Int32
ss-congested-txed	Description: Total number of Subsystem Congested (SSC) messages sent by the local SCCP. Triggers: Increments when the local SCCP sends an SSC message. Availability: per VPN context Type: Counter	Int32
ss-congested-rcvd	Description: Total number of Subsystem Congested (SSC) messages received by the local SCCP. Triggers: Increments when the local SCCP receives an SSC message. Availability: per VPN context Type: Counter	Int32
sccp-rtf-notrans-addr-nature	Description: Total number of SCCP routing failures due to unavailable translation for a bad address. Triggers: Increments when the local SCCP routing failures is due to unavailable translation for a bad address. Availability: per VPN context Type: Counter	Int32
sccp-rtf-notrans-addr-specific	Description: Total number of SCCP routing failures due to unavailable translation for a specific address. Triggers: Increments when the local SCCP routing failures is due to unavailable translation for a specific address. Availability: per VPN context Type: Counter	Int32
sccp-rtf-netwfail-pc-unavail	Description: Total number of SCCP routing failures due to a network failure or the point code is unavailable. Triggers: Increments when the SCCP routing failure is due to a network failure or the point code being unavailable. Availability: per VPN context Type: Counter	Int32

Variables	Description	Data Type
sccp-rtf-netw-conges	Description: Total number of SCCP routing failures due to a network failure result from congestion. Triggers: Increments when the SCCP routing failure is due to a network failure resulting from congestion. Availability: per VPN context Type: Counter	Int32
sccp-rtf-ssn-fail	Description: Total number of SCCP routing failures due to a subsystem failure of a specific subsystem number (SSN). Triggers: Increments when the SCCP routing failure is due to a subsystem failure of a specific subsystem number (SSN). Availability: per VPN context Type: Counter	Int32
sccp-rtf-ssn-conges	Description: Total number of SCCP routing failures due to subsystem congestion of a specific subsystem number (SSN). Triggers: Increments when the SCCP routing failure is due to subsystem congestion of a specific subsystem number (SSN). Availability: per VPN context Type: Counter	Int32
sccp-syntax-error	Description: Total number of SCCP functions that have failed due to a syntax error in a message. Triggers: Increments when the SCCP function fails due to a syntax error in a message. Availability: per VPN context Type: Counter	Int32
sccp-reassem-err-timer	Description: Total number of SCCP functions that failed due to the expiration of the reassembly timer for a message. Triggers: Increments when the SCCP function fails due to the expiration of the reassembly timer for a message. Availability: per VPN context Type: Counter	Int32
sccp-reassem-err-sequence	Description: Total number of SCCP functions that failed because segments arrived out of sequence during reassembly. Triggers: Increments when the SCCP function fails because segments arrived out of sequence during reassembly. Availability: per VPN context Type: Counter	Int32
sccp-reassem-err-space	Description: Total number of SCCP functions that failed due to out of memory or space errors occurred during reassembly. Triggers: Increments when the SCCP function fails because out of memory or space errors occurred during reassembly. Availability: per VPN context Type: Counter	Int32
sccp-hop-counter-violation	Description: Total number of SCCP functions that have failed due to hop counter violations in messages. Triggers: Increments when the SCCP function fails due to hop counter violations in a message. Availability: per VPN context Type: Counter	Int32

Variables	Description	Data Type
sccp-provider-ini-reset	Description: Total number of SCCP functions that have failed because the service provider initiated a reset. Triggers: Increments when the SCCP function fails due to a reset initiated by the service provider. Availability: per VPN context Type: Counter	Int32
sccp-provider-ini-rel	Description: Total number of SCCP functions that have failed because the service provider initiated a release. Triggers: Increments when the SCCP function fails due to a release initiated by the service provider. Availability: per VPN context Type: Counter	Int32
sccp-msg-toolarge-segment	Description: Total number of SCCP functions that have failed because the message was too large for segmentation. Triggers: Increments when the SCCP function fails because the message was too large for segmentation. Availability: per VPN context Type: Counter	Int32
sccp-segmentation-fail	Description: Total number of SCCP functions that have failed due to failure of the segmentation procedure. Triggers: Increments when the SCCP function fails due to failure of the segmentation procedure. Availability: per VPN context Type: Counter	Int32
sccp-total-msgs-handled	Description: Total number of SCCP messages that have been handled by the subsystem. Triggers: Increments when a new SCCP message is received by the system and the message is intended for the local SCCP. Availability: per VPN context Type: Counter	Int32
sccp-total-msgs-handl-local-ss	Description: Total number of SCCP messages that have been handled by the subsystem but were intended for local subsystems. Triggers: Increments when a new SCCP message is received by the system. Availability: per VPN context Type: Counter	Int32
sccp-total-msgs-req-gtt	Description: Total number of SCCP messages that require global title translation (GTT). Triggers: Increments when an SCCP message is received, by the system, which requires GTT. Availability: per VPN context Type: Counter	Int32
sccp-udt-sent	Description: Total number of Unit Data (UDT) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new UDT message. Availability: per VPN context Type: Counter	Int32

Variables	Description	Data Type
sccp-udt-rcvd	Description: Total number of Unit Data (UDT) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new UDT message. Availability: per VPN context Type: Counter	Int32
sccp-udts-sent	Description: Total number of Unit Data Service (UDTS) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new UDTS message. Availability: per VPN context Type: Counter	Int32
sccp-udts-rcvd	Description: Total number of Unit Data Service (UDTS) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new UDTS message. Availability: per VPN context Type: Counter	Int32
sccp-xudt-sent	Description: Total number of Extended Unit Data (XUDT) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new XUDT message. Availability: per VPN context Type: Counter	Int32
sccp-xudt-rcvd	Description: Total number of Extended Unit Data (XUDT) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new XUDT message. Availability: per VPN context Type: Counter	Int32
sccp-xudts-sent	Description: Total number of Extended Unit Data Service (XUDTS) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new XUDTS message. Availability: per VPN context Type: Counter	Int32
sccp-xudts-rcvd	Description: Total number of Extended Unit Data Service (XUDTS) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new XUDTS message. Availability: per VPN context Type: Counter	Int32
sccp-ludt-sent	Description: Total number of Long Unit Data (LUDT) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new LUDT message. Availability: per VPN context Type: Counter	Int32
sccp-ludt-rcvd	Description: Total number of Long Unit Data (LUDT) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new LUDT message. Availability: per VPN context Type: Counter	Int32
sccp-ludts-sent	Description: Total number of Long Unit Data Service (LUDTS) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new LUDTS message. Availability: per VPN context Type: Counter	Int32

Variables	Description	Data Type
sccp-ludts-rcvd	Description: Total number of Long Unit Data Service (LUDTS) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new LUDTS message. Availability: per VPN context Type: Counter	Int32
sccp-cr-sent	Description: Total number of Connection Request (CR) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new CR message. Availability: per VPN context Type: Counter	Int32
sccp-cr-rcvd	Description: Total number of Connection Request (CR) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new CR message. Availability: per VPN context Type: Counter	Int32
sccp-cc-sent	Description: Total number of Connection Confirm (CC) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new CC message. Availability: per VPN context Type: Counter	Int32
sccp-cc-rcvd	Description: Total number of Connection Confirm (CC) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new CC message. Availability: per VPN context Type: Counter	Int32
sccp-cref-sent	Description: Total number of Connection Refuse (CREF) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new CREF message. Availability: per VPN context Type: Counter	Int32
sccp-cref-rcvd	Description: Total number of Connection Refuse (CREF) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new CREF message. Availability: per VPN context Type: Counter	Int32
sccp-rsr-msg-sent	Description: Total number of Reset Request (RSR) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new RSR message. Availability: per VPN context Type: Counter	Int32
sccp-rsr-msg-rcvd	Description: Total number of Reset Request (RSR) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new RSR message. Availability: per VPN context Type: Counter	Int32
sccp-err-msg-sent	Description: Total number of Protocol Data Unit Error (ERR) messages sent by the SCCP layer. Triggers: Increments when the SCCP layer sends a new ERR message. Availability: per VPN context Type: Counter	Int32

Variables	Description	Data Type
sccp-err-msg-rcvd	Description: Total number of Protocol Data Unit Error (ERR) messages received by the SCCP layer. Triggers: Increments when the SCCP layer receives a new ERR message. Availability: per VPN context Type: Counter	Int32
sccp-unequipped-user	Description: Total number of routing failures that occur when the upper SAP of the SCCP layer is unequipped. Triggers: Increments when routing failures occur because the upper SAP of the SCCP layer is unequipped. Availability: per VPN context Type: Counter	Int32
sccp-reason-unknown	Description: Total number of failures at the SCCP layer that are due to unknown reasons or reasons not specified in this table. Triggers: Increments when SCCP failure occurs due to unknown reason(s). Availability: per VPN context Type: Counter	Int32
sccp-congested-msg-rcvd	Description: Total number of SCCP/Subsystem Congested (SSC) messages received by the local SCCP. Triggers: Increments when a new SSC message is received by the SCCP. Availability: per VPN context Type: Counter	Int32
sccp-prohibit-msg-rcvd	Description: Total number of SCCP/Subsystem Prohibited (SSP) messages received by the local SCCP. Triggers: Increments when a new SSP message is received by the SCCP. Availability: per VPN context Type: Counter	Int32
sccp-class-0-sent	Description: Total number of SCCP class -0 (basic connectionless) messages are sent by SCCP function. Triggers: Increments when the SCCP layer sends a new class-0 message. Availability: per VPN context Type: Counter	Int32
sccp-class-0-rcvd	Description: Total number of SCCP class -0 (basic connectionless) messages are received by SCCP function. Triggers: Increments when the SCCP layer receives a new class-0 message. Availability: per VPN context Type: Counter	Int32
sccp-class-1-sent	Description: Total number of SCCP class -1 (basic connectionless) messages are sent by SCCP function. Triggers: Increments when the SCCP layer sends a new class-1 message. Availability: per VPN context Type: Counter	Int32
sccp-class-1-rcvd	Description: Total number of SCCP class -1 (basic connectionless) messages are received by SCCP function. Triggers: Increments when the SCCP layer receives a new class-1 message. Availability: per VPN context Type: Counter	Int32

Variables	Description	Data Type
sccp-DT1-sent	Description: Total number of Data Form 1 (DT1) messages that have been sent by the SCCP function. Triggers: Increments when the SCCP layer sends a new DT1 message. Availability: per VPN context Type: Counter	Int32
sccp-DT1-rcvd	Description: Total number of Data Form 1 (DT1) messages that have been received by the SCCP function. Triggers: Increments when the SCCP layer receives a new DT1 message. Availability: per VPN context Type: Counter	Int32
sccp-rel-compl-supv-fail	Description: Total number of SCCP functions released due to supervision failure in the SCCP release complete procedure. Triggers: Increments when the SCCP function is released due to supervision failure of the SCCP release complete procedure. Availability: per VPN context Type: Counter	Int32
sccp-rel-disconn-req-rx	Description: Total number of SCCP functions released due to received Disconnect Request messages. Triggers: Increments when the SCCP function is released because a DR is received. Availability: per VPN context Type: Counter	Int32
sccp-routing-fail-invalid-ins-routing-req	Description: Total number of routing failures due to invalid INS in the routing requested by the SCCP function. Triggers: Increments when the routing fails due to invalid INS in the routing requested by the SCCP function. Availability: per VPN context Type: Counter	Int32
sccp-routing-fail-invalid-isni-routing-req	Description: Total number of routing failures due to invalid intermediate signaling network identification (ISNI) information in the routing requested by the SCCP function. Triggers: Increments when the routing fails due to invalid ISNI information in the routing requested by the SCCP function. Availability: per VPN context Type: Counter	Int32
sccp-routing-fail-isni-constrained-routing	Description: Total number of routing failures due to constraints by the intermediate signaling network identification (ISNI) information in the routing requested by the SCCP function. Triggers: Increments when the routing fails due to constraints in the ISNI information in the routing requested by the SCCP function. Availability: per VPN context Type: Counter	Int32
sccp-routing-fail-redundant-isni-routing-req	Description: Total number of routing failures due to redundant intermediate signaling network identification (ISNI) information in the routing requested by the SCCP function. Triggers: Increments when the routing fails due to redundant ISNI information in the routing requested by the SCCP function. Availability: per VPN context Type: Counter	Int32

Variables	Description	Data Type
sccp-routing-fail-isni-identify-network	Description: Total number of routing failures due to missing intermediate signaling network identification (ISNI) information in the routing requested by the SCCP function. Triggers: Increments when the routing fails due to missing ISNI information in the routing requested by the SCCP function. Availability: per VPN context Type: Counter	Int32
sccp-inactivity-rcv-tmr-expired	Description: Total number of times the SCCP inactivity receive timer expired. Triggers: Increments when the SCCP inactivity receive timer expires. Availability: per VPN context Type: Counter	Int32
sccp-inactivity-test-sent	Description: Total number of SCCP Inactivity Test messages that were sent. Triggers: Increments when an SCCP Inactivity Test message is sent. Availability: per VPN context Type: Counter	Int32
sccp-inactivity-test-received	Description: Total number of SCCP Inactivity Test messages that were received. Triggers: Increments when an SCCP Inactivity Test message is received. Availability: per VPN context Type: Counter	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 60

SGs Schema Statistics

The SGs schema provides operational statistics that can be used for monitoring and troubleshooting the following products: MME

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 60. Bulk Statistic Variables in the SGs Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the S-GW service. This is a key variable. Type: Information	String

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the S-GW service. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	Displays the name of the S-GW service for which the statistics are displayed. This is a key variable. Type: Information	String
servid	The identification number of the service configured on the system that is currently facilitating the S-GW service. This is an internal reference number. This is a key variable. Type: Information	Int32
pag-req-tx	SGS-AP Statistics - The total number of paging requests transmitted by this service. Type: Counter	Int32
pag-req-retx	SGS-AP Statistics - The total number of paging requests retransmitted by this service. Type: Counter	Int32
pag-req-rx	SGS-AP Statistics - The total number of paging requests received by this service. Type: Counter	Int32
pag-rej-tx	SGS-AP Statistics - The total number of paging reject messages transmitted by this service. Type: Counter	Int32
pag-rej-retx	SGS-AP Statistics - The total number of paging reject messages retransmitted by this service. Type: Counter	Int32
pag-rej-rx	SGS-AP Statistics - The total number of paging reject messages received by this service. Type: Counter	Int32
service-req-tx	SGS-AP Statistics - The total number of service request messages transmitted by this service. Type: Counter	Int32
service-req-retx	SGS-AP Statistics - The total number of service request messages retransmitted by this service. Type: Counter	Int32
service-req-rx	SGS-AP Statistics - The total number of service request messages received by this service. Type: Counter	Int32
dl-ud-tx	SGS-AP Statistics - The total number of downlink unit data messages transmitted by this service. Type: Counter	Int32
dl-ud-retx	SGS-AP Statistics - The total number of downlink unit data messages retransmitted by this service. Type: Counter	Int32
dl-ud-rx	SGS-AP Statistics - The total number of downlink unit data messages received by this service. Type: Counter	Int32
ul-ud-tx	SGS-AP Statistics - The total number of uplink unit data messages transmitted by this service. Type: Counter	Int32
ul-ud-retx	SGS-AP Statistics - The total number of uplink unit data messages retransmitted by this service. Type: Counter	Int32

Variables	Description	Data Type
ul-ud-rx	SGS-AP Statistics - The total number of uplink unit data messages received by this service. Type: Counter	Int32
localupd-req-tx	SGS-AP Statistics - The total number of location update request messages transmitted by this service. Type: Counter	Int32
localupd-req-retx	SGS-AP Statistics - The total number of location update request messages retransmitted by this service. Type: Counter	Int32
localupd-req-rx	SGS-AP Statistics - The total number of location update request messages received by this service. Type: Counter	Int32
localupd-accept-tx	SGS-AP Statistics - The total number of location update accept messages transmitted by this service. Type: Counter	Int32
localupd-accept-retx	SGS-AP Statistics - The total number of location update accept messages retransmitted by this service. Type: Counter	Int32
localupd-accept-rx	SGS-AP Statistics - The total number of location update accept messages received by this service. Type: Counter	Int32
localupd-rej-tx	SGS-AP Statistics - The total number of location update reject messages transmitted by this service. Type: Counter	Int32
localupd-rej-retx	SGS-AP Statistics - The total number of location update reject messages retransmitted by this service. Type: Counter	Int32
localupd-rej-rx	SGS-AP Statistics - The total number of location update reject messages received by this service. Type: Counter	Int32
tmsi-reloc-tx	SGS-AP Statistics - The total number of TMSI reallocation complete messages transmitted by this service. Type: Counter	Int32
tmsi-reloc-retx	SGS-AP Statistics - The total number of TMSI reallocation complete messages retransmitted by this service. Type: Counter	Int32
tmsi-reloc-rx	SGS-AP Statistics - The total number of TMSI reallocation complete messages received by this service. Type: Counter	Int32
alert-req-tx	SGS-AP Statistics - The total number of alert request messages transmitted by this service. Type: Counter	Int32
alert-req-retx	SGS-AP Statistics - The total number of alert request messages retransmitted by this service. Type: Counter	Int32
alert-req-rx	SGS-AP Statistics - The total number of alert request messages received by this service. Type: Counter	Int32

Variables	Description	Data Type
alert-ack-tx	SGS-AP Statistics - The total number of alert ack messages transmitted by this service. Type: Counter	Int32
alert-ack-retx	SGS-AP Statistics - The total number of alert ack messages retransmitted by this service. Type: Counter	Int32
alert-ack-rx	SGS-AP Statistics - The total number of alert ack messages received by this service. Type: Counter	Int32
alert-rej-tx	SGS-AP Statistics - The total number of alert reject messages transmitted by this service. Type: Counter	Int32
alert-rej-retx	SGS-AP Statistics - The total number of alert reject messages retransmitted by this service. Type: Counter	Int32
alert-rej-rx	SGS-AP Statistics - The total number of alert reject messages received by this service. Type: Counter	Int32
ue-actind-tx	SGS-AP Statistics - The total number of UE activity indication messages transmitted by this service. Type: Counter	Int32
ue-actind-retx	SGS-AP Statistics - The total number of UE activity indication messages retransmitted by this service. Type: Counter	Int32
ue-actind-rx	SGS-AP Statistics - The total number of UE activity indication messages received by this service. Type: Counter	Int32
eps-detind-tx	SGS-AP Statistics - The total number of EPS detach indication messages transmitted by this service. Type: Counter	Int32
eps-detind-retx	SGS-AP Statistics - The total number of EPS detach indication messages retransmitted by this service. Type: Counter	Int32
eps-detind-rx	SGS-AP Statistics - The total number of EPS detach indication messages received by this service. Type: Counter	Int32
eps-detack-tx	SGS-AP Statistics - The total number of EPS detach ack messages transmitted by this service. Type: Counter	Int32
eps-detack-retx	SGS-AP Statistics - The total number of EPS detach ack messages retransmitted by this service. Type: Counter	Int32
eps-detack-rx	SGS-AP Statistics - The total number of EPS detach ack messages received by this service. Type: Counter	Int32
imsi-detind-tx	SGS-AP Statistics - The total number of IMSI detach indication messages transmitted by this service. Type: Counter	Int32
imsi-detind-retx	SGS-AP Statistics - The total number of IMSI detach indication messages retransmitted by this service. Type: Counter	Int32
imsi-detind-rx	SGS-AP Statistics - The total number of IMSI detach indication messages received by this service. Type: Counter	Int32

Variables	Description	Data Type
imsi-detack-tx	SGS-AP Statistics - The total number of IMSI detach ack messages transmitted by this service. Type: Counter	Int32
imsi-detack-retx	SGS-AP Statistics - The total number of IMSI detach ack messages retransmitted by this service. Type: Counter	Int32
imsi-detack-rx	SGS-AP Statistics - The total number of IMSI detach ack messages received by this service. Type: Counter	Int32
reset-ind-tx	SGS-AP Statistics - The total number of reset indication messages transmitted by this service. Type: Counter	Int32
reset-ind-retx	SGS-AP Statistics - The total number of reset indication messages retransmitted by this service. Type: Counter	Int32
reset-ind-rx	SGS-AP Statistics - The total number of reset indication messages received by this service. Type: Counter	Int32
reset-ack-tx	SGS-AP Statistics - The total number of reset ack messages transmitted by this service. Type: Counter	Int32
reset-ack-retx	SGS-AP Statistics - The total number of reset ack messages retransmitted by this service. Type: Counter	Int32
reset-ack-rx	SGS-AP Statistics - The total number of reset ack messages received by this service. Type: Counter	Int32
mm-inforeq-tx	SGS-AP Statistics - The total number of MM information request messages transmitted by this service. Type: Counter	Int32
mm-inforeq-retx	SGS-AP Statistics - The total number of MM information request messages retransmitted by this service. Type: Counter	Int32
mm-inforeq-rx	SGS-AP Statistics - The total number of MM information request messages received by this service. Type: Counter	Int32
rel-req-tx	SGS-AP Statistics - The total number of release request messages transmitted by this service. Type: Counter	Int32
rel-req-retx	SGS-AP Statistics - The total number of release request messages retransmitted by this service. Type: Counter	Int32
rel-req-rx	SGS-AP Statistics - The total number of release request messages received by this service. Type: Counter	Int32
status-tx	SGS-AP Statistics - The total number of status messages transmitted by this service. Type: Counter	Int32
status-retx	SGS-AP Statistics - The total number of status messages retransmitted by this service. Type: Counter	Int32
status-rx	SGS-AP Statistics - The total number of status messages received by this service. Type: Counter	Int32

Variables	Description	Data Type
ue-unreach-tx	SGS-AP Statistics - The total number of UE unreachable messages transmitted by this service. Type: Counter	Int32
ue-unreach-retx	SGS-AP Statistics - The total number of UE unreachable messages retransmitted by this service. Type: Counter	Int32
ue-unreach-rx	SGS-AP Statistics - The total number of UE unreachable messages received by this service. Type: Counter	Int32
unk-msg-tx	SGS-AP Statistics - The total number of unknown messages transmitted by this service. Type: Counter	Int32
unk-msg-retx	SGS-AP Statistics - The total number of unknown messages retransmitted by this service. Type: Counter	Int32
unk-msg-rx	SGS-AP Statistics - The total number of unknown messages received by this service. Type: Counter	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 61

SGSN Schema Statistics

The SGSN Schema provides operational statistics that can be used for monitoring and troubleshooting the following products: 2.5G SGSN, 3G SGSN

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 61. Bulk Statistic Variables in the SGSN Schema

Variables	Description	Data Type
vpnname	Description: Indicates the name of VPN context in which SGSN service is configured. This is a key variable. Type: Counter	String

Variables	Description	Data Type
vpnid	Description: Indicates the identifier of VPN context in which SGSN service is configured. This is a key variable. Type: Counter	Int32
servname	Description: Indicates the name of SGSN service for which these statistics are collected. This is a key variable. Type: Counter	String
mcc	Description: Indicates the mobile country code (MCC) of SGSN service for which these statistics are collected. This is a key variable. Type: Counter	Int32
mnc	Description: Indicates the mobile network code (MNC) of SGSN service for which these statistics are collected. This is a key variable. Type: Counter	Int32
lac	Description: Indicates the location area code (LAC) of SGSN service for which these statistics are collected. This is a key variable. Type: Counter	Int32
rac	Description: Indicates the routing area code (RAC) of SGSN service for which these statistics are collected. This is a key variable. Type: Counter	Int32
3G-attached	Description: Total number of subscribers, including home and visiting, attached for 3G service. Triggers: 1) Increments when a subscriber attaches to the SGSN. 2) Decrements when a subscriber detaches from the SGSN. Availability: per SGSN service, per RA Type: Gauge	Int32
2G-attached	Description: Total number of subscribers, including home and visiting, attached for 2G service. Triggers: 1) Increments when a subscriber attaches to the SGSN. 2) Decrements when a subscriber detaches from the SGSN. Availability: per GPRS service; per RA Type: Gauge	Int32
3G-home-subscribers	Description: Indicates the total number of home subscribers attached for 3G service; where 'home' means the MCC and MNC of the IMSI are equal to the SGSN PLMN ID. Type: Gauge.	Int32
2G-home-subscribers	Description: Indicates the total number of home subscribers attached for 2G service; where 'home' means the MCC and MNC of the IMSI are equal to the SGSN PLMN ID. Type: Gauge.	Int32

Variables	Description	Data Type
3G-visiting-national	Description: This proprietary gauge indicates the total number of attached subscribers (active and standby) whose MCC (from IMSI) matches with SGSN service's MCC, but MNC is different from the SGSN service's MNC for 3G service. Triggers: 1) Increments when a national subscriber attaches to the SGSN. 2) Decrements when a national subscriber detaches from the SGSN. Availability: per SGSN service, per RA Type: Gauge	Int32
2G-visiting-national	Description: This proprietary gauge indicates the total number of attached subscribers (active and standby) whose MCC (from IMSI) matches with GPRS service's MCC, but MNC is different from the GPRS service's MNC for 2G service. Triggers: 1) Increments when a national subscriber attaches to the SGSN. 2) Decrements when a national subscriber detaches from the SGSN. Availability: per GPRS service; per RA Type: Gauge	Int32
3G-visiting-foreign	Description: This proprietary gauge indicates the total number of attached subscribers (active and standby) whose MCC/MNC (from IMSI) does not match with the PLMN of the 3G SGSN service. Triggers: 1) Increments when a foreign subscriber attaches to the SGSN. 2) Decrements when a foreign subscriber detaches from the SGSN. Availability: per SGSN service, per RA Type: Gauge	Int32
2G-visiting-foreign	Description: This proprietary gauge indicates the total number of attached subscribers (active and standby) whose MCC/MNC (from IMSI) does not match with the PLMN of the 2G SGSN service. Triggers: 1) Increments when a subscriber establishes an Iu and completes the security procedure in it. 2) Decrements when a connected subscriber releases the Iu. Availability: per GPRS service; per RA Type: Gauge	Int32
3G-network-sharing-supp-ue	Description: This proprietary gauge indicates the total number of 3G Network Sharing Supporting User Equipment currently in the system. This statistics is specific to releases 8.1 and higher. Triggers: Increments when a network sharing supporting UE connects with the 3G SGSN. Availability: per SGSN service, per RA Type: Gauge	Int32
3G-network-sharing-non-supp-ue	Description: This proprietary gauge indicates the total number of 3G Network Sharing Non-supporting User Equipment currently in the system. This statistics is specific to releases 8.1 and higher. Triggers: Increments when a network sharing non-supporting UE connects with the 3G SGSN. Availability: per SGSN service, per RA Type: Gauge	Int32

Variables	Description	Data Type
pmm-connected	Description: Total number of subscribers in packet mobility management-connected (PMM-CONNECTED) state. Triggers: 1) Increments when a subscriber attaches to the SGSN. 2) Decrements when a subscriber detaches from the SGSN. Availability: per SGSN service, per RA Type: Gauge	Int32
pmm-idle	Description: Total number of subscribers in packet mobility management-idle (PMM-IDLE) mode. Type: Gauge	Int32
gprs-standby	Description: Total number of GPRS subscribers in standby mode. Type: Gauge	Int32
gprs-ready	Description: Total number of GPRS subscribers in ready mode. Type: Gauge	Int32
3G-attached-with-pdp	Description: Total number of 3G visiting and home subscribers in attached state with at least one active PDP context. Triggers: This gauge changes after successful activation of the first PDP context for a subscriber. Availability: per SGSN service, per RA Type: Gauge	Int32
2G-attached-with-pdp	Description: Total number of 2G visiting and home subscribers in attached state with at least one active PDP context per GPRS service. Triggers: This gauge changes after successful activation of the first PDP context for a subscriber. Availability: per GPRS service Type: Gauge	Int32
3G-attached-no-pdp	This statistic has been deprecated.	Int32
2G-attached-no-pdp	This statistic has been deprecated.	Int32
3G-detached	Description: Total number of subscribers in detached state with PDP context for 3G service. Type: Gauge	Int32
3G-total-attach-req-all	Description: Total number of all types of 3G Attach Request messages on the SGSN service, including SGSN-only and combined attaches. Type: Counter	Int32
3G-total-attach-req	Description: Total number of IMSI and P-TMSI 3G Attach Request messages for GPRS and IMSI (PS and CS). Type: Counter	Int32
3G-total-comb-attach-req	Description: Total number of combined 3G Attach Request messages. Type: Counter	Int32
2G-total-attach-req-all	Description: Total number of all types of 2G Attach Request messages on the GPRS service, including GPRS-only and combined attaches. Type: Counter	Int32
2G-total-attach-req	Description: Total number of GPRS-only IMSI and P-TMSI Attach Request messages for GPRS and IMSI (PS and CS). Type: Counter	Int32

Variables	Description	Data Type
2G-total-comb-attach-req	Description: Total number of combined 2G Attach Request messages. Type: Counter	Int32
3G-IMSI-Attch	Description: Total number of International Mobile Subscriber Identifier (IMSI) Attach Request messages for CS attach in 3G service. Type: Counter	Int32
3G-IMSI-Attch-Combined	Description: Total number of IMSI and P-TMSI Attach Request messages for GPRS and IMSI (PS and CS) attach in 3G service. Type: Counter	Int32
2G-IMSI-Attch	Description: Total number of IMSI Attach Request messages for CS in 2G service. Type: Counter	Int32
2G-IMSI-Attch-Combined	Description: Total number of IMSI and P-TMSI Attach Request messages for GPRS and IMSI (PS and CS) attach in 2G service. Type: Counter	Int32
3G-ptmsi-Attch	Description: Total number of Packet-Temporary Mobile Subscriber Identifier (P-TMSI) Attach Request messages for CS attach in 3G service. Type: Counter	Int32
3G-ptmsi-Attch-Combined	Description: Total number of P-TMSI Attach Request messages for combined GPRS and IMSI (PS and CS) in 3G service. Type: Counter	Int32
3G-local-ptmsi-Attch	Description: Total number of local P-TMSI Attach Request messages for CS attach in 3G service. Type: Counter	Int32
3G-local-ptmsi-Attch-comb	Description: Total number of local P-TMSI Attach Request messages for combined PS and CS attach in 3G service. Type: Counter	Int32
3G-remote-ptmsi-Attch	Description: Total number of remote P-TMSI Attach Request messages for CS in 3G service. Type: Counter	Int32
3G-remote-ptmsi-Attch-comb	Description: Total number of remote P-TMSI Attach Request messages for combined PS and CS attach in 3G service. Type: Counter	Int32
2G-ptmsi-Attch	Description: Total number of P-TMSI Attach Request messages for CS attach in 2G service. Type: Counter	Int32
2G-ptmsi-Attch-Combined	Description: Total number of P-TMSI Attach Request messages for combined GPRS and IMSI (PS and CS) in 2G service. Type: Counter	Int32
2G-local-ptmsi-Attch	Description: Total number of remote P-TMSI Attach Request messages for CS in 2G service. Type: Counter	Int32
2G-local-ptmsi-Attch-comb	Description: Total number of local P-TMSI Attach Request messages for combined GPRS and IMSI (PS and CS) in 2G service. Type: Counter	Int32

Variables	Description	Data Type
2G-remote-ptmsi-Attach	Description: Total number of remote P-TMSI Attach Request messages for CS in 2G service. Type: Counter	Int32
2G-remote-ptmsi-Attach-comb	Description: Total number of remote P-TMSI Attach Request messages for combined GPRS and IMSI (PS and CS) in 2G service. Type: Counter	Int32
3G-ret-imsi-attach	Description: Total number of IMSI Attach Request messages retransmitted for 3G service. Type: Counter	Int32
3G-ret-imsi-attach-comb	Description: Total number of IMSI Attach Request messages retransmitted for combined GPRS and IMSI (PS and CS) in 3G service. Type: Counter	Int32
2G-ret-imsi-attach	Description: Total number of IMSI Attach Request messages retransmitted for 2G service. Type: Counter	Int32
2G-ret-imsi-attach-comb	Description: Total number of IMSI Attach Request messages retransmitted for combined GPRS and IMSI (PS and CS) in 2G service. Type: Counter	Int32
3G-ret-local-ptmsi-attach	Description: Total number of local P-TMSI Attach Request messages retransmitted for 3G service. Type: Counter	Int32
3G-ret-local-ptmsi-attach-comb	Description: Total number of local P-TMSI Attach Request messages retransmitted for combined GPRS and IMSI (PS and CS) in 3G service. Type: Counter	Int32
2G-ret-local-ptmsi-attach	Description: Total number of local P-TMSI Attach Request messages retransmitted for 2G service. Type: Counter	Int32
2G-ret-local-ptmsi-attach-comb	Description: Total number of local P-TMSI Attach Request messages retransmitted for combined GPRS and IMSI (PS and CS) in 2G service. Type: Counter	Int32
3G-ret-remote-ptmsi-attach	Description: Total number of remote P-TMSI Attach Request messages retransmitted for 3G service. Type: Counter	Int32
3G-ret-remote-ptmsi-attach-comb	Description: Total number of remote P-TMSI Attach Request messages retransmitted for combined GPRS and IMSI (PS and CS) in 3G service. Type: Counter	Int32
2G-ret-remote-ptmsi-attach	Description: Total number of remote P-TMSI Attach Request messages retransmitted for 2G service. Type: Counter	Int32
2G-ret-remote-ptmsi-attach-comb	Description: Total number of remote P-TMSI Attach Request messages retransmitted for combined GPRS and IMSI (PS and CS) in 2G service. Type: Counter	Int32

Variables	Description	Data Type
3G-attach-accept	Description: Total number of Attach Request messages accepted for 3G service. Triggers: On sending a successful attach-accept with attach-result “GPRS-only Attached”. Availability: per SGSN service, per RA Type: Counter	Int32
3G-comb-attach-accept	Description: Total number of Attach Accept messages sent with attach result “Combined GPRS/IMSI Attached” in 3G service. Triggers: On sending a successful attach-accept with attach-result “Combined attached”. Availability: per SGSN service, per RA Type: Counter	Int32
3G-ret-attach-accept	Description: Total number of Attach Request accept messages retransmitted for 3G service. Type: Counter	Int32
3G-ret-attach-accept-comb	Description: Total number of combined (GPRS and IMSI) Attach Request accept messages retransmitted for 3G service. Type: Counter	Int32
2G-attach-accept	Description: Total number of Attach Request messages accepted for 2G service. Triggers: On sending a successful attach-accept with attach-result “GPRS-only Attached”. Availability: per GPRS service Type: Counter	Int32
2G-comb-attach-accept	Description: Total number of Attach Accepts sends with attach -result “Combined GPRS/IMSI Attached” in 2G service. Triggers: On sending a successful attach-accept with attach-result “Combined attached”. Availability: per GPRS service Type: Counter	Int32
2G-ret-attach-accept	Description: Total number of Attach Request accepted messages retransmitted for 2G service. Type: Counter	Int32
2G-ret-attach-accept-comb	Description: Total number of combined (GPRS and IMSI) Attach Request accept messages retransmitted for 2G service. Type: Counter	Int32
3G-attach-complete	Description: Total number of attach procedures completed for 3G service. Type: Counter	Int32
2G-attach-complete	Description: Total number of attach procedures completed for 2G service. Type: Counter	Int32
3G-attach-reject-all	Description: Total number of Attach Request messages rejected for for 3G service. Type: Counter	Int32
3G-attach-reject	Description: Total number of Attach Rejects sent with individual causes against Attach Request of type “GPRS Attach” in 3G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-attach-reject-comb	Description: Sum of all Attach-Reject counters with individual causes sent against Attach Requests of type "Combined GPRS/IMSI Attach" in 3G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-reject-all	Description: Total number of Attach Request messages rejected for 2G service. Type: Counter	Int32
2G-attach-reject	Description: Total number of Attach Rejects sent with individual causes against Attach Requests of type "GPRS Attach" in 2G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per GPRS service Type: Counter	Int32
2G-attach-reject-comb	Description: Sum of all Attach-Reject counters with individual causes sent against Attach requests of type "Combined GPRS/IMSI Attach" in 2G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-imsi-unknown-at-hlr	Description: Total number of Attach Rejects sent with cause "imsi unknown at hlr" against Attach requests of type "GPRS Attach" in 3G service. Triggers: Counter increments when - the HLR sends a bad response to an SAI-Req or a GLU-Req, or - the SGSN gets zero authentication vectors from the HLR for a SAI-Req, or - when an operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-imsi-unknown-at-hlr	Description: Total number of Attach Rejects sent with cause "imsi unknown at hlr" against Attach requests of type "GPRS Attach" in 2G service. Triggers: - the HLR sends a bad response to an SAI-Req or a GLU-Req, or - the SGSN gets zero authentication vectors from the HLR for a SAI-Req, or - when an operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-illegal-ms	Description: Total number of Attach Requests rejected for 3G service due to illegal mobile subscriber. Type: Counter	Int32
2G-attach-rej-illegal-ms	Description: Total number of Attach Requests rejected for 2G service due to illegal mobile subscriber. Type: Counter	Int32
3G-attach-rej-illegal-me	Description: Total number of Attach Requests rejected for 3G service due to illegal mobile equipment. Type: Counter	Int32
2G-attach-rej-illegal-me	Description: Total number of Attach Requests rejected for 2G service due to illegal mobile equipment. Type: Counter	Int32

Variables	Description	Data Type
3G-gprs-service-not-allowed	Description: Total number of Attach Rejects sent with cause "GPRS Services not allowed" against Attach requests of type "GPRS Attach" in 3G service. Triggers: Increments - on getting a cl (subs-with) while a RAU/attach is in progress. - on getting "Subscriber Unknown" failure from HLR for SAI-Req/GLU-Req. - for rejecting attaches due to subscriber control inactivity. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-gprs-service-not-allowed	Description: Total number of Attach Rejects sent with cause "GPRS Services not allowed" against Attach requests of type "GPRS Attach" in 3G service. Triggers: Increments - on getting a cl (subs-with) while a RAU/attach is in progress. - on getting "Subscriber Unknown" failure from HLR for SAI-Req/GLU-Req. - for rejecting attaches due to subscriber control inactivity. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service. Type: Counter	Int32
3G-gprs-and-non-gprs-service-not-allowed	Description: Total number of Attach Rejects sent with cause "GPRS and non-GPRS Services not allowed" against Attach requests of type "GPRS Attach" in 3G service. Triggers: Increments - on getting "IMSI unknown" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-gprs-and-non-gprs-service-not-allowed	Description: Total number of Attach Rejects sent with cause "GPRS and non-GPRS Services not allowed" against Attach requests of type "GPRS Attach" in 2G service. Triggers: Counter increments - on getting "IMSI unknown" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-msid-not-derived-by-nwt	Description: Total number of Attach Rejects sent with cause "msid not derived by nwt" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Counter increments - on getting periodic RAU with old RAI as a non-local RAI. - when PTMSI-IE is missing in RAU. - when old RAI has invalid location area values (0x0000 or 0xffff) for PTMSI-attaches/RAUs. - when getting a RAU with old RAI in 2G and PTMSI is unknown. - when getting PTMSI-SIG-MISMATCH SGSN Context Request sent with IMSI Validated. - when getting a RAU Request while an attach with the same peer-SGSN-PTMSI is in progress. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-attach-rej-msid-not-derived-by-nwt	Description: Total number of Attach Rejects sent with cause "msid not derived by nwt" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increment - when SGSN-Context-Resp arrives with any cause other than "accepted". - when GMM-Identity-Req with MS fails. - when GTP-Identity-Req with MS fails. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-implicitly-detach	Description: Total number of Attach Requests rejected with cause "implicitly detached" against Attach requests of type "GPRS Attach" in 3G service. Triggers: Increment - if RAU at 3G when subscriber was detached from 2G. - when we get a different IMSI in SGSN Context Response for an SGSN Context Request sent with IMSI validated. - when we get RAU while awaiting a Detach Accept. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-implicitly-detach	Description: Total number of Attach Requests rejected with cause "implicitly detached" against Attach requests of type "GPRS Attach" in 2G service. Triggers: Increments - when we get an RAU from an unknown MS. - on T3350 expiry for the attach-accept - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-plmn-not-allowed	Description: Total number of Attach Rejects sent with cause "plmn not allowed" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-plmn-not-allowed	Description: Total number of Attach Rejects sent with cause "plmn not allowed" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-la-not-allowed	Description: Total number of GPRS Attach Rejected for 3G service due to specific location area not allowed. Type: Counter	Int32
2G-attach-rej-la-not-allowed	Description: Total number of GPRS Attach Rejected for 2G service due to specific location area not allowed. Type: Counter	Int32

Variables	Description	Data Type
3G-roaming-not-allowed-in-this-location-area	Description: Total number of Attach Rejects sent with cause “Roaming not allowed in this Location Area” against Attach Requests of type “GPRS Attach” in 3G service. Triggers: 1) When rejecting as a shared SGSN as operator not accepting the given IMSI. 2) When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-roaming-not-allowed-in-this-location-area	Description: Total number of Attach Rejects sent with cause “Roaming not allowed in this Location Area” against Attach Requests of type “GPRS Attach” in 2G service. Triggers: When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-gprs-service-not-allowed-in-this-plmn	Description: Total number of Attach Rejects sent with cause “GPRS services not allowed in this PLMN” against Attach Requests of type “GPRS Attach” in 3G service. Triggers: 1) On getting "Roaming Not allowed" from HLR for SAI-Req/GLU-Req. 2) When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-gprs-service-not-allowed-in-this-plmn	Description: Total number of Attach Rejects sent with cause “GPRS services not allowed in this PLMN” against Attach Requests of type “GPRS Attach” in 2G service. Triggers: 1) On getting "Roaming not allowed" from HLR for SAI-Req/GLU-Req. 2) When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-no-suitable-cells-in-location-area	Description: Total number of Attach Rejects sent with cause "No suitable cell in location area" against Attach requests of type "GPRS Attach" in 3G service. Triggers: 1) On getting "UMTS Access Control" from HLR for SAI-Req/GLU-Req. 2) When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-no-suitable-cells-in-location-area	Description: Total number of Attach Rejects sent with cause "No suitable cell in location area" against Attach requests of type "GPRS Attach" in 2G service. Triggers: 1) On getting "UMTS Access Control" from HLR for SAI-Req/GLU-Req. 2) When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-msc-not-reachable	Description: Total number of GPRS Attach Rejected for 3G service as MSC not reachable. Type: Counter	Int32
2G-attach-rej-msc-not-reachable	Description: Total number of GPRS Attach Rejected for 2G service as MSC not reachable. Type: Counter	Int32

Variables	Description	Data Type
3G-attach-rej-network-failure	Description: Total number of Attach Rejects sent with cause "Network Failure" against Attach requests of type "GPRS Attach" in 3G service. Triggers: 1) RNC is overloaded. 2) Not enough credits at session manager. 3) On getting cause "data missing from HLR" in SAI-Req/GLU-Req. 4) Too many IU's for the same IMSI. 5) On congestion, if configured for attach-throttling. 6) When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
3G-attach-rej-network-failure-ext	Description: This proprietary counter tracks the total number of GPRS Attach Rejects due to external triggers with cause "network failure". Triggers: Counter increments when on of the following occurs: • Throttling due to congestion. • Data missing from HLR. • SAI response timeout. • UGL response timeout. • Check IMEI response timeout from EIR. • Operator policy restrictions. • MS has too many Ius. • RNC overloaded. Availability: per SGSN service, per RA Type: Counter	Int32
3G-attach-rej-network-failure-int	Description: This proprietary counter tracks the total number of GPRS Attach Rejects due to internal triggers with cause "network failure". Triggers: Session Manager is out of credits. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-network-failure	Description: Total number of Attach Rejects sent with cause "Network Failure" against Attach requests of type "GPRS Attach" in 3G service. Triggers: 1) Not enough credits at session manager. 2) On getting cause "data missing from HLR" in SAI-Req/GLU-Req. 3) Too many IU's for the same IMSI. 4) On congestion, if configured for attach-throttling. 5) When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
2G-attach-rej-network-failure-ext	Description: This proprietary counter tracks the total number of GPRS Attach Rejects due to external triggers with cause "network failure". Triggers: Increments when one of the following occurs: • Throttling due to congestion. • Data missing from HLR. • SAI response timeout. • UGL response timeout. • Check IMEI response timeout from EIR. • Operator policy restrictions. Availability: per GPRS service Type: Counter	Int32
2G-attach-rej-network-failure-int	Description: This proprietary counter tracks the total number of GPRS Attach Rejects due to internal triggers with cause "network failure". Triggers: No internal triggers at this time - this statistic is a placeholder for future development. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-mac-failure	Description: Total number of GPRS Attach Rejected for 3G service due to message authenticate code (MAC) failure. Type: Counter	Int32
2G-attach-rej-mac-failure	Description: Total number of GPRS Attach Rejected for 2G service due to MAC failure. Type: Counter	Int32
3G-attach-rej-sync-failure	Description: Total number of Attach Rejects sent with cause "sync failure" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-sync-failure	Description: Total number of Attach Rejects sent with cause "sync failure" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-congestion	Description: Total number of Attach Rejects sent with cause "Congestion" against Attach Request of type "GPRS Attach" in a 3G service. Triggers: Increments - on congestion, if configured for attach-throttling. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-attach-rej-congestion	Description: Total number of GPRS Attach Rejected for 2G service due to network congestion. Triggers: Increments - on congestion, if configured for attach-throttling. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-gsm-auth-unacceptable	Description: Total number of Attach Rejects sent with cause "gsm auth unacceptable" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-gsm-auth-unacceptable	Description: Total number of Attach Rejects sent with cause "gsm auth unacceptable" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-no-pdp-ctx-activated	Description: Total number of Attach Rejects sent with cause "no pdp ctx activated" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-no-pdp-ctx-activated	Description: Total number of Attach Rejects sent with cause "no pdp ctx activated" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-retry-from-new-cell	Description: Total number of Attach Rejects sent with cause "retry from new cell" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-retry-from-new-cell	Description: Total number of Attach Rejects sent with cause "retry from new cell" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-attach-rej-sem-wrong-msg	Description: Total number of Attach Rejects sent with cause "sem wrong msg" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-sem-wrong-msg	Description: Total number of Attach Rejects sent with cause "sem wrong msg" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-invalid-mand-info	Description: Total number of Attach Rejects sent with cause "invalid mand info" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-invalid-mand-info	Description: Total number of Attach Rejects sent with cause "invalid mand info" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-msg-type-not-exist	Description: Total number of Attach Rejects sent with cause "msg type not exist" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-msg-type-not-exist	Description: Total number of Attach Rejects sent with cause "msg type not exist" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-attach-rej-msg-type-not-comp-prot-state	Description: Total number of Attach Rejects sent with cause "msg type not comp prot state" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-msg-type-not-comp-prot-state	Description: Total number of Attach Rejects sent with cause "msg type not comp prot state" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-ie-non-existent	Description: Total number of Attach Rejects sent with cause "ie non existent" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-ie-non-existent	Description: Total number of Attach Rejects sent with cause "ie non existent" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-conditional-ie-err	Description: Total number of Attach Rejects sent with cause "conditional ie err" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-conditional-ie-err	Description: Total number of Attach Rejects sent with cause "conditional ie err" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments - when getting an appropriate decode error. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-attach-rej-msg-not-comp-prot-state	Description: Total number of Attach Rejects sent with cause "msg not comp prot state" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments - when getting an Attach Request before getting Relocation-complete during SRNS. - when getting periodic RAU in a direct transfer message. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-msg-not-comp-prot-state	Description: Total number of Attach Rejects sent with cause "msg not comp prot state" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-protocol-error	Description: Total number of Attach Rejects sent with cause "protocol error" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments When getting an appropriate decode error. When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-protocol-error	Description: Total number of Attach Rejects sent with cause "protocol error" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments - when the PLMN-id in BSSGP message does not match the configured PLMN at GPRS-service. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-attach-rej-unknown-cause	Description: Total number of Attach Rejects sent with cause "unknown cause" against Attach Requests of type "GPRS Attach" in 3G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-rej-unknown-cause	Description: Total number of Attach Rejects sent with cause "unknown cause" against Attach Requests of type "GPRS Attach" in 2G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-attach-rej-imsi-unknown-at-hlr	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 3G service due to IMSI not known at HLR. Type: Counter	Int32
2G-comb-attach-rej-imsi-unknown-at-hlr	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 3G service due to IMSI not known at HLR. Type: Counter	Int32

Variables	Description	Data Type
3G-comb-attach-rej-illegal-ms	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 3G service due to illegal mobile subscriber. Type: Counter	Int32
2G-comb-attach-rej-illegal-ms	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 2G service due to illegal mobile subscriber. Type: Counter	Int32
3G-comb-attach-rej-illegal-me	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 3G service due to illegal mobile equipment. Type: Counter	Int32
2G-comb-attach-rej-illegal-me	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 2G service due to illegal mobile equipment. Type: Counter	Int32
3G-comb-gprs-service-not-allowed	Description: Total number of Attach Rejects sent with cause "GPRS services not allowed" against Attach Requests of type "Combined GPRS/IMSI Attach" in 3G service. Triggers: 1) On getting a cl (subs-with) while a RAU/attach is in progress. 2) On getting "Subscriber Unknown" failure from hlr for glu/sai-req. 3) For rejecting attaches due to subscriber-control-inactivity. 4) When operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-gprs-service-not-allowed	Description: Total number of Attach Rejects sent with cause "GPRS services not allowed" against Attach Requests of type "Combined GPRS/IMSI Attach" in 2G service. Triggers: Increments - on getting a cl (subs-with) while a RAU/attach is in progress. - on getting "Subscriber Unknown" failure from hlr for glu/sai-req. - for rejecting attaches due to subscriber-control-inactivity. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-gprs-and-non-gprs-svc-not-allow	Description: Total number of Attach Rejects sent with cause "GPRS and non-GPRS services not allowed" against Attach Requests of type "Combined GPRS/IMSI Attach" in 3G service. Triggers: - on getting "Imsi unknown" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-gprs-and-non-gprs-svc-not-allow	Description: Total number of Attach Rejects sent with cause "GPRS and non-GPRS services not allowed" against Attach Requests of type "Combined GPRS/IMSI Attach" in 3G service. Triggers: Increments - on getting "Imsi unknown" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-comb-attach-rej-msid-not-derived-by-nwt	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 3G service as network failed to derive MSID from request message. Type: Counter	Int32
2G-comb-attach-rej-msid-not-derived-by-nwt	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 2G service as network failed to derive MSID from request message. Type: Counter	Int32
3G-comb-attach-rej-implicitly-detach	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 3G service as subscriber implicitly detached from network. Type: Counter	Int32
2G-comb-attach-rej-implicitly-detach	Description: Total number of combined (GPRS and IMSI) Attach Requests rejected for 3G service as subscriber implicitly detached from network. Type: Counter	Int32
3G-comb-attach-rej-plmn-not-allowed	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 3G service due to specific PLMN not allowed. Type: Counter	Int32
2G-comb-attach-rej-plmn-not-allowed	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 2G service due to specific PLMN not allowed. Type: Counter	Int32
3G-comb-attach-rej-la-not-allowed	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 3G service due to specific location area not allowed. Type: Counter	Int32
2G-comb-attach-rej-la-not-allowed	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 2G service due to specific location area not allowed. Type: Counter	Int32
3G-comb-roam-not-allow-in-loc-area	Description: Total number of Attach Rejects sent with cause “Roaming not allowed in LA” against attached request of type “Combined GPRS/IMSI Attach” in 3G service. Triggers: Increments - when rejecting as a shared SGSN due to no operator accepting the given IMSI. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-roam-not-allow-in-loc-area	Description: Total number of Attach Rejects sent with cause “Roaming not allowed in LA” against attached request of type “Combined GPRS/IMSI Attach” in 2G service. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-gprs-svc-not-allow-in-plmn	Description: Total number of Attach Rejects sent with cause "GPRS Service Not Allowed in PLMN" against Attach Requests of type "Combined GPRS/IMSI Attach" in 3G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-comb-gprs-svc-not-allow-in-plmn	Description: Total number of Attach Rejects sent with cause "GPRS Service Not Allowed in PLMN" against Attach Requests of type "Combined GPRS/IMSI Attach" in 2G service. Triggers: Increments - on getting "Roaming not allowed" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-no-suitable-cells-in-loc-area	Description: Total number of Attach Rejects sent with cause "No suitable cells in LA" against Attach requests of type "Combined GPRS/IMSI Attach" in 3G service. Triggers: Increments - on getting "UMTS access control" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-no-suitable-cells-in-loc-area	Description: Total number of Attach Rejects sent with cause "No suitable cells in LA" against Attach requests of type "Combined GPRS/IMSI Attach" in 2G service. Triggers: Increments - on getting "UMTS access control" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-attach-rej-msc-not-reachable	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 3G service as MSC not reachable. Type: Counter	Int32
2G-comb-attach-rej-msc-not-reachable	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 2G service as MSC not reachable. Type: Counter	Int32
3G-comb-attach-rej-network-failure	Description: Total number of Attach Rejects sent with cause "Network Failure" against Attach requests of type "Combined GPRS/IMSI Attach" in 3G service. Triggers: Increments - on getting cause "data missing from HLR" in SAI-Req/GLU-Req. - on XID failure for RAU. - inability to send an SGSN-CTX-Req out for an RAU. - inability to send a Check-IMEI Request out. - on congestion, if configured for attach-throttling. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-comb-attach-rej-network-failure-ext	Description: This proprietary counter tracks the total number of COMBO Attach Rejects due to external triggers with cause "network failure". Triggers: Counter increments when on of the following occurs: • Throttling due to congestion. • Data missing from HLR. • SAI response timeout. • UGL response timeout. • Check IMEI response timeout from EIR. • Operator policy restrictions. • MS has too many Ius. • RNC overloaded. Availability: per SGSN service, per RA Type: Counter	Int32
3G-comb-attach-rej-network-failure-int	Description: This proprietary counter tracks the total number of COMBO Attach Rejects due to internal triggers with cause "network failure". Triggers: Session Manager is out of credits. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej-network-failure	Description: Total number of Attach Rejects sent with cause "Network Failure" against Attach requests of type "Combined GPRS/IMSI Attach" in 2G service. Triggers: Increments - on getting cause "data missing from HLR" in SAI-Req/GLU-Req. - on XID failure for RAU. - inability to send an SGSN-CTX-Req out for an RAU. - inability to send a Check-IMEI Request out. - on congestion, if configured for attach-throttling. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
2G-comb-attach-rej-network-failure-ext	Description: This proprietary counter tracks the total number of COMBO Attach Rejects due to external triggers with cause "network failure". Triggers: Increments when one of the following occurs: • Throttling due to congestion. • Data missing from HLR. • SAI response timeout. • UGL response timeout. • Check IMEI response timeout from EIR. • Operator policy restrictions. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
2G-comb-attach-rej-network-failure-int	Description: This proprietary counter tracks the total number of COMBO Attach Rejects due to internal triggers with cause "network failure". Triggers: No internal triggers at this time - this statistic is a placeholder for future development. Availability: per GPRS service Type: Counter	Int32
3G-comb-attach-rej-mac-failure	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 3G service due to message authenticate code (MAC) failure. Type: Counter	Int32
2G-comb-attach-rej-mac-failure	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 2G service due to MAC failure. Type: Counter	Int32
3G-comb-attach-rej-sync-failure	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 3G service due to context synchronization failure. Type: Counter	Int32
2G-comb-attach-rej-sync-failure	Description: Total number of combined (GPRS and IMSI) Attach Rejected for 2G service due to context synchronization failure. Type: Counter	Int32
3G-comb-attach-rej-congestion	Description: Total number of Attach Rejects sent with cause "Congestion" against Attach requests of type "Combined GPRS/IMSI Attach" in 3G service. Triggers: Increments - on congestion, if configured for attach-throttling. - when operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej-congestion	Description: Total number of Attach Rejects sent with cause "Congestion" against Attach requests of type "Combined GPRS/IMSI Attach" in the 2G service. Triggers: Increments - on congestion, if configured for attach-throttling. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-attach-rej-gsm-auth-unacceptable	Description: Total number of Attach Rejects sent with cause "gsm-auth-unacceptable" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 3G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej-gsm-auth-unacceptable	Description: Total number of Attach Rejects sent with cause "gsm-auth-unacceptable" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 2G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-comb-attach-rej-no-pdp-ctx-activated	Description: Total number of Attach Rejects sent with cause "no-pdp-ctx-activated" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 3G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej-no-pdp-ctx-activated	Description: Total number of Attach Rejects sent with cause "no-pdp-ctx-activated" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 2G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej-retry-from-new-cell	Description: Total number of Attach Rejects sent with cause "retry-from-new-cell" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 3G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej-retry-from-new-cell	Description: Total number of Attach Rejects sent with cause "retry-from-new-cell" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 2G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej-sem-wrong-msg	Description: Total number of Attach Rejects sent with cause "sem-wrong-msg" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 3G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej-sem-wrong-msg	Description: Total number of Attach Rejects sent with cause "sem-wrong-msg" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 2G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej-invalid-mand-info	Description: Total number of Attach Rejects sent with cause "invalid-mand-info" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 3G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-comb-attach-rej-invalid-mand-info	Description: Total number of Attach Rejects sent with cause "invalid-mand-info" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 2G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej-msg-type-not-exist	Description: Total number of Attach Rejects sent with cause "msg-type-not-exist" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 3G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej-msg-type-not-exist	Description: Total number of Attach Rejects sent with cause "msg-type-not-exist" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 2G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej-msg-type-not-comp-pstate	Description: Total number of Attach Rejects sent with cause "msg-type-not-comp-pstate" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 3G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej-msg-type-not-comp-pstate	Description: Total number of Attach Rejects sent with cause "msg-type-not-comp-pstate" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 2G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej-ie-non-existent	Description: Total number of Attach Rejects sent with cause "ie-non-existent" against Attach Requests of type "Combined GPRS/IMSI Attach" in the 3G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-comb-attach-rej- ie-non-existent	Description: Total number of Attach Rejects sent with cause “ie-non-existent” against Attach Requests of type “Combined GPRS/IMSI Attach” in the 2G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej- conditional-ie-err	Description: Total number of Attach Rejects sent with cause “conditional-ie-err” against Attach Requests of type “Combined GPRS/IMSI Attach” in the 3G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej- conditional-ie-err	Description: Total number of Attach Rejects sent with cause “conditional-ie-err” against Attach Requests of type “Combined GPRS/IMSI Attach” in the 2G service Triggers: Increments - on decode failure of messages. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej- msg-not-comp-prot- state	Description: Total number of Attach Rejects sent with cause “msg-not-comp-prot-state” against Attach Requests of type “Combined GPRS/IMSI Attach” in the 3G service Triggers: Increments - when SGSN receives an Attach Request before getting Relocation-Complete during SRNS. - when SGSN receives periodic RAU in a Dir-Transfer message. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej- msg-not-comp-prot- state	Description: Total number of Attach Rejects sent with cause “msg-not-comp-prot-state” against Attach Requests of type “Combined GPRS/IMSI Attach” in the 2G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej- protocol-error	Description: Total number of Attach Rejects sent with cause “protocol-error” against Attach Requests of type “Combined GPRS/IMSI Attach” in the 3G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-comb-attach-rej-protocol-error	Description: Total number of Attach Rejects sent with cause “protocol-error” against Attach Requests of type “Combined GPRS/IMSI Attach” in the 2G service Triggers: Increments - when the PLMN ID in the MSSGP message does not match the configured PLMN in the GPRS Service. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-attach-rej-unknown-cause	Description: Total number of Attach Rejects sent with any cause other than those captured in stats already listed against Attach Requests of type “Combined GPRS/IMSI Attach” in the 3G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-attach-rej-unknown-cause	Description: Total number of Attach Rejects sent with any cause other than those captured in stats already listed against Attach Requests of type “Combined GPRS/IMSI Attach” in the 2G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-total-attach-fail	Description: Total number of Attach Requests of type “GPRS Attach” that were dropped from processing in 3G service. Triggers: Increments when - another Attach, differing from this Attach, was received and pre-empted existing Attach procedure. - Iu released while the Attach procedure was in progress. Availability: per SGSN service, per RA Type: Counter	Int32
3G-total-attach-fail-comb	Description: Total number of Attach Requests of type “Combined GPRS/IMSI Attach” that were dropped from processing in 3G service. Triggers: Increments when - another Attach, differing from this Attach, was received and pre-empted existing Attach procedure. - Iu released while the Attach procedure was in progress. Availability: per SGSN service, per RA Type: Counter	Int32
3G-total-attach-fail-all	Description: Sum of 3G-total-attach-fail + 3G-total-attach-fail-comb. Triggers: n/a Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-total-attach-fail	Description: Total number of Attach Requests of type “GPRS Attach” that were dropped from processing in 2G service. Triggers: Increments when another Attach, differing from current Attach, was received and pre-empted existing Attach procedure. Availability: per GPRS service, per RA Type: Counter	Int32
2G-attach-fail-suspend-received	Description: This proprietary counter tracks the total number of GPRS Attach failures due to Suspend Request received from the MS. Triggers: SGSN received a Suspend Request from the MS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-bvc-rst-received	Description: This proprietary counter tracks the total number of GPRS Attach failures due to BVC Reset received from the BSS. Triggers: SGSN receives a BVC Reset from the BSS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-sai-failure	Description: This proprietary counter tracks the total number of GPRS Attach failures due to SAI failure. Triggers: Counter increments when either of the following occurs: - SAI response timeout - Negative response for SAI Request from HLR Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-auth-tmr-expiry	Description: This counter tracks the total number of GPRS Attach failures due to expiry of the Auth timer. Triggers: Auth timer expires during authentication. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-sgsn-init-detach	Description: The total number of GPRS Attach failures because of an SGSN-initiated Detach. Triggers: Counter increments when one of the following occurs: - Ciphering algorithm negotiation failure and configuration enabled to reject the attach procedure. - IMEI is blacklisted under IMEI profile in SGSN. - Cancel location type Subscription withdrawn. - Admin clears subscribers. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
2G-attach-fail-identity-failure	Description: This counter tracks the total number of GPRS Attach failures due to Identity failure. Triggers: Counter increments when either of the following occurs: • Identity response timeout (IMSI, IMEI/IMEISV) • Negative response for identity request (IMSI, IMEI/IMEISV) from MS Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-radio-status-cell-resel	Description: This counter tracks the total number of GPRS Attach failures due to "radio status cell reselection". Triggers: Radio status cell reselection occurs. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-check-imei-failure	Description: This counter tracks the total number of GPRS Attach failures due to Check IMEI Response Failure. Triggers: Increments when either of the following occurs: • Check IMEI response timeout from EIR. • IMEI being Black Listed in the EIR. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-rej-due-to-congestion	Description: This counter tracks the total number of GPRS Attach failures due to throttling because of congestion. Triggers: Throttling occurs due to congestion. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-camel-failure	Description: This counter tracks the total number of GPRS Attach failures due to CAMEL failure. Triggers: Increments when either of the following occurs: • CAMEL response timeout. • CAMEL release response. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-radio-status-bad	Description: This counter tracks the total number of GPRS Attach failures due to occurrence of Radio Status Bad. Triggers: Bad Radio Status received from the BSS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-t3350-expiry	Description: This counter tracks the total number of GPRS Attach failures due to T3350 timer expiry. Triggers: T3350 timer expires prior to receiving the Attach Accept. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
2G-attach-fail-auth-failure	Description: This counter tracks the total number of GPRS Attach failures due to Auth response failure. Triggers: XRES mismatch in Auth Response occurs during authentication. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-glu-failure	Description: This counter tracks the total number of GPRS Attach failures due to UGL failure. Triggers: Increments in response to: • UGL response timeout • Negative response for UGL request from HLR Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-ms-init-detach	Description: This counter tracks the total number of GPRS Attach failures due to SGSN receiving Detach Request from the MS. Triggers: SGSN received a Detach Request from an MS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-opr-policy-failure	Description: This counter tracks the total number of GPRS Attach failures due to Operator Policy restrictions. Triggers: Operator Policy includes restrictions. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-cl-init-detach	Description: This counter tracks the total number of GPRS Attach failures due to the SGSN receiving a Cancel Location Request from the HLR. Triggers: Cancel Location Request is received from the HLR. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-abort-on-attach	Description: This counter tracks the total number of GPRS Attach failures due to abort during attach. Triggers: MS does 3G Attach when 2G Attach is in progress. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-attach-on-attach	Description: This counter tracks the total number of GPRS Attach failures due to attach on attach. Triggers: MS tries to attach again when attach is in progress. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-ready-tmr	Description: This counter tracks the total number of GPRS Attach failures due to expiration of the READY timer. Triggers: READY Timer expiry. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
2G-attach-fail-camel-srv-not-assoc	Description: This counter tracks the total number of GPRS Attach failures due to CAMEL service not being associated with the GPRS service. Triggers: CAMEL service not associated with GPRS service for the Prepaid type MS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-p-tmsi-sign-mismatch	Description: This counter tracks the total number of GPRS Attach failures due to PTMSI signature mismatch. Triggers: Configuration enables SGSN to reject the Attach Request when PTMSI signature mismatch occurs. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-xid-resp-failure	Description: This counter tracks the total number of GPRS Attach failures due to XID response failure. Triggers: LLC XID error response for XID Request. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-internal-failure	Description: This counter tracks the total number of GPRS Attach failures due to Internal Failures. Triggers: Any one of the following: • Invalid DB record. • Attach Request PDU corruption. • Application initiated abort on the attach procedure. • Identity request sending failure from the stack. • Failure in decoding the CLP from the PTMSI. • Resource allocation failure. • CLP recreation failing during the inter RAT. Availability: per GPRS service Type: Counter	Int32
2G-total-attach-fail-comb	Description: Total number of Attach Requests of type “Combined GPRS/IMSI Attach” that were dropped from processing in 2G service. Triggers: Increments when another Attach, differing from current Attach, was received and pre-empted existing Attach procedure. Availability: per GPRS service, per RA Type: Counter	Int32
2G-attach-fail-comb-suspend-received	Description: This counter tracks the total number of COMBO Attach failures due to SGSN receiving a Suspend Request from the MS. Triggers: Suspend Request from MS Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
2G-attach-fail-comb-bvc-rst-received	Description: This counter tracks the total number of COMBO Attach failures due to SGSN receiving a BVC reset from the BSS. Triggers: BVC Reset from the BSS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-sai-failure	Description: This counter tracks the total number of COMBO Attach failures due to SAI failure. Triggers: Any one of the following: - SAI Response timeout. - Negative response for SAI Request from the HLR. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-auth-tmr-expiry	Description: This counter tracks the total number of COMBO Attach failures due to Auth timer expiry. Triggers: Auth timer expires during authentication. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-sgsn-init-detach	Description: This counter tracks the total number of COMBO Attach failures due to SGSN-initiated Detach. Triggers: Any one of the following: - Ciphering algorithm negotiation failure and configuration enabled to reject the attach procedure. - IMEI is blacklisted under IMEI profile in SGSN. - Cancel location type Subscription withdrawn. - Admin clears subscribers. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-identity-failure	Description: This counter tracks the total number of COMBO Attach failures due to Identity failure. Triggers: Either one of the following occurs: - Identity Response timeout (IMSI, IMEI/IMEISV). - Negative response for Identity Request (IMSI, IMEI/IMEISV) from MS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-radio-status-cell-resele	Description: This counter tracks the total number of COMBO Attach failures due to radio status cell reselection. Triggers: Radio status cell reselection. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
2G-attach-fail-comb-check-imei-failure	Description: This counter tracks the total number of COMBO Attach failures due to Check IMEI Response failure. Triggers: Either one of the following occurs: • Check IMEI response timeout from EIR. • IMEI being Black Listed in the EIR. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-rej-due-to-congestion	Description: This counter tracks the total number of COMBO Attach failures due to throttling which has occurred in response to congestion. Triggers: Throttling due to congestion. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-camel-failure	Description: This counter tracks the total number of COMBO Attach failures due to CAMEL failure. Triggers: Either one of the following: • CAMEL response timeout. • CAMEL release response. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-radio-status-bad	Description: This counter tracks the total number of COMBO Attach failures due to the SGSN receiving Bad Radio Status from the BSS. Triggers: Bad Radio Status received from the BSS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-t3350-expiry	Description: This counter tracks the total number of COMBO Attach failures due to the expiration of the T3350 timer for the Attach Accept. Triggers: T3350 timer expiry for Attach Accept. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-auth-failure	Description: This counter tracks the total number of COMBO Attach failures due to Auth response failure. Triggers: XRES mismatch in Auth Response during authentication. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-glu-failure	Description: This counter tracks the total number of COMBO Attach failures due to UGL failure. Triggers: Either of the following: • UGL Response timeout. • Negative response for UGL Request from the HLR. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
2G-attach-fail-comb-ms-init-detach	Description: This counter tracks the total number of COMBO Attach failures due to SGSN receiving Detach Request from the MS. Triggers: Detach Request received from the MS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-opr-policy-failure	Description: This counter tracks the total number of COMBO Attach failures due to Operator Policy restrictions. Triggers: Restrictions configured in the operator policy. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-cl-init-detach	Description: This counter tracks the total number of COMBO Attach failures because the SGSN has received a Cancel Location Request from the HLR. Triggers: Cancel Location Request from HLR. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-abort-on-attach	Description: This counter tracks the total number of COMBO Attach failures due to abort during attach. Triggers: MS does 3G Attach when 2G Attach is in progress. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-attach-on-attach	Description: This counter tracks the total number of COMBO Attach failures due to attempting an attach during an attach. Triggers: MS does attach when attach is in progress. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-ready-tmr	Description: This counter tracks the total number of COMBO Attach failures due to READY timer expiring. Triggers: READY timer expires. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-camel-srv-not-assoc	Description: This counter tracks the total number of COMBO Attach failures due to CAMEL service not being associated with the GPRS service. Triggers: CAMEL service not associated with GPRS service for the Prepaid type MS. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-p-tmsi-sign-mismatch	Description: This counter tracks the total number of COMBO Attach failures because the SGSN has been configured to reject Attach Requests when PTMSI signature mismatch occurs. Triggers: PTMSI signature mismatch. Availability: per GPRS service Type: Counter	Int32
2G-attach-fail-comb-xid-resp-failure	Description: This counter tracks the total number of COMBO Attach failures due to XID Response failure at the LLC. Triggers: XID error response for XID Request. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
2G-attach-fail-comb-internal-failure	Description: This counter tracks the total number of COMBO Attach failures due to internal failures. Triggers: Any one of the following: • Invalid DB record. • Attach Request PDU corruption. • Application initiated abort on the attach procedure. • Identity request sending failure from the stack. • Failure in decoding the CLP from the PTMSI. • Resource allocation failure. • CLP recreation failing during the inter RAT. Availability: per GPRS service Type: Counter	Int32
2G-total-attach-fail-all	Description: Sum of the stats for 2G-total-attach-fail + 2G-total-attach-fail-comb. Triggers: n/a Availability: per GPRS service, per RA Type: Counter	Int32
3G-attach-fail- iu_release	Description: Total number of attach procedures failed for 3G service due to Iu interface release. Type: Counter	Int32
3G-attach-fail- iu_release-external	Description: This proprietary counter tracks the total number of GPRS Attach Failures due to the Iu being released before the Attach complete due to external triggers in the 3G service. Triggers: The counter increments when any one of the following occurs: • Iu Release request from RNC before attach complete. • RAI deletion from the configuration. • RNC deletion from the configuration. • Identity response(for IMSI or IMEI) timeout. • Authentication response timeout. • Detach request from MS during attach procedure. • Security mode control failure due to RNC. • Inter RAT to 2G before during attach procedure. • Outbound inter SGSN RAU during attach procedure. • Attaching to multiple IUPS services. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-attach-fail-iu_release-internal	Description: This proprietary counter tracks the total number of GPRS Attach Failures due to the Iu being released before the Attach complete due to external triggers in the 3G service. Triggers: No internal triggers at this time - this statistic is a placeholder for future development. Availability: per SGSN service, per RA Type: Counter	Int32
3G-attach-fail-ongoing-proc	Description: This proprietary counter indicates the total number of attach procedures failed for 3G service due to a new attach received. Triggers: Increments when we abort an ongoing attach due to another new attach in 3G. Availability: per SGSN service, per RA Type: Counter	Int32
2G-attach-fail-ongoing-proc	Description: This proprietary counter indicates the total number of Attach procedures failed for 2G service due to a new attach received. Triggers: Increments when • Suspend occurs during Attach procedure • Radio-status is lost during Attach procedure • BVC-block occurs during Attach procedure • T3350 timer expires during Attach procedure • T3360 timer expires during Attach procedure • XID timer expires during Attach procedure Availability: per GPRS service Type: Counter	Int32
3G-attach-fail-iu_release-comb	Description: Total number of combined (GPRS and IMSI) attach procedures failed due to Iu released for 3G service. Type: Counter	

Variables	Description	Data Type
3G-attach-fail- lu_release-comb- external	Description: This proprietary counter tracks the total number of COMBO Attach Failures due to the lu being released before the Attach complete due to external triggers in the 3G service. Triggers: The counter increments when any one of the following occurs: • lu Release request from RNC before attach complete. • RAI deletion from the configuration. • RNC deletion from the configuration. • Identity response(for IMSI or IMEI) timeout. • Authentication response timeout. • Detach request from MS during attach procedure. • Security mode control failure due to RNC. • Inter RAT to 2G before during attach procedure. • Outbound inter SGSN RAU during attach procedure. • Attaching to multiple IUPS services. Availability: per SGSN service, per RA Type: Counter	Int32
3G-attach-fail- lu_release-comb- internal	Description: This proprietary counter tracks the total number of COMBO Attach Failures due to the lu being released before the Attach complete due to internal triggers in the 3G service. Triggers: No internal triggers at this time - this statistic is a placeholder for future development. Availability: per SGSN service, per RA Type: Counter	Int32
3G-attach-fail- ongoing-proc-comb	Description: Total number of combined (GPRS and IMSI) attach procedures failed due to on going attach procedures for 3G service. Type: Counter	Int32
2G-attach-fail- ongoing-proc-comb	Description: Total number of combined (GPRS and IMSI) attach procedures failed due to on going attach procedures for 2G service. Type: Counter	Int32
3G-intra-rau	Description: Total number of intra SGSN routing area updates received for 3G service. Type: Counter	Int32
2G-intra-rau	Description: Total number of intra SGSN routing area updates received for 2G service. Type: Counter	Int32
3G-periodic-rau	Description: Total number of periodic routing area updates received for 3G service. Type: Counter	Int32
2G-periodic-rau	Description: Total number of periodic routing area updates received for 2G service. Type: Counter	Int32
3G-intra-comb-rau	Description: Total number of intra SGSN combined (GPRS and IMSI) routing area updates received for 3G service. Type: Counter	Int32

Variables	Description	Data Type
2G-intra-comb-rau	Description: Total number of intra SGSN combined (GPRS and IMSI) routing area updates received for 2G service. Type: Counter	Int32
3G-inter-sgsn-rau	Description: Total packet switched inter-SGSN-RA update request messages for 3G service. Type: Counter	Int32
2G-inter-sgsn-rau	Description: Total packet switched inter-SGSN-RA update request messages for 2G service. Type: Counter	Int32
3G-inter-sgsn-comb-rau	Description: Total combined (GPRS and IMSI) inter-SGSN-RA update request messages for 3G service. Type: Counter	Int32
2G-inter-sgsn-comb-rau	Description: Total combined (GPRS and IMSI) inter-SGSN-RA update request messages for 2G service. Type: Counter	Int32
3G-ret-intra-rau	Description: Total routing area update request messages retransmitted for intra-SGSN RA updates for 3G. Type: Counter	Int32
2G-ret-intra-rau	Description: Total routing area update request messages retransmitted for intra-SGSN RA updates for 2G. Type: Counter	Int32
3G-ret-periodic-rau	Description: Total periodic intra-RA update messages retransmitted for 3G. Type: Counter	Int32
2G-ret-periodic-rau	Description: Total periodic intra-RA update messages retransmitted for 2G. Type: Counter	Int32
3G-ret-inter-sgsn-rau	Description: Total packet switched inter-SGSN-RA update request messages retransmitted for 3G service. Type: Counter	Int32
2G-ret-inter-sgsn-rau	Description: Total packet switched inter-SGSN-RA update request messages retransmitted for 2G service. Type: Counter	Int32
3G-rau-accept-intra	Description: Sum of all RAU-Accepts sent against intra-SGSN-RAU requests with update type “RA Updating” in 3G service. Triggers: Increments on sending a successful RAU-Accept with update-result “RA Updating”. Availability: per SGSN service, per RA Type: Counter	Int32
3G-comb-upd-rau-accept-intra	Description: Total number of RAU-Accepts sent against intra-SGSN-RAU requests with update type “Combined RA/LA update” in 3G service. Triggers: Increments on sending a successful rau-accept with update-result "Combined RA/LA updated". Type: Counter	Int32

Variables	Description	Data Type
3G-rau-accept-inter	Description: Sum of all RAU-Accepts sent against inter-SGSN-RAU requests with update type “RA Updating” in 3G service. Triggers: Increments on sending a successful RAU-Accept with update-result “RA Updating”. Availability: per SGSN service, per RA Type: Counter	Int32
3G-comb-upd-rau-accept-inter	Description: Total number of RAU-Accepts sent against inter-SGSN-RAU requests with update type “Combined RA/LA Update” in 3G service. Triggers: Increments on sending a successful rau-accept with update-result "Combined RA/LA Updated". Availability: per SGSN service, per RA Type: Counter	Int32
2G-rau-accept-intra	Description: Sum of all RAU-Accepts sent against intra-SGSN-RAU requests with update type “RA Updated” in 2G service. Triggers: Increments on sending a successful RAU-Accept with update-result “RA Updated”. Availability: per GPRS service Type: Counter	Int32
2G-comb-upd-rau-accept-intra	Description: Total number of RAU-Accepts sent against intra-SGSN-RAU requests with update type “Combined RA/LA Update” in 2G service. Triggers: Increments on sending a successful RAU-accept with update-result "Combined RA/LA Updated". Availability: per GPRS service Type: Counter	Int32
2G-rau-accept-inter	Description: Sum of all RAU-Accepts sent against inter-SGSN-RAU requests with update type “RA Updated” in 2G service. Triggers: Increments on sending a successful RAU-Accept with update-result “RA Updated”. Availability: per GPRS service Type: Counter	Int32
2G-comb-upd-rau-accept-inter	Description: Total number of RAU-Accepts sent against inter-SGSN-RAU requests with update type “Combined RA/LA update” in 2G service. Triggers: Increments on sending a successful rau-accept with update-result "Combined RA/LA updated". Availability: per GPRS service Type: Counter	Int32
3G-rau-accept-periodic	Description: Sum of all RAU-Accepts sent against intra-SGSN-RAU requests of type “Periodic Updating” with update type “RA updating” in 3G service. Triggers: Increments on sending a successful RAU-Accept with update-result “Periodic Updating”. Availability: per SGSN service, per RA Type: Counter	Int32
2G-rau-accept-periodic	Description: Sum of all RAU-Accepts sent against intra-SGSN-RAU requests of type “Periodic Updating” with update type “RA updated” in 2G service. Triggers: Increments on sending a successful RAU-Accept with update-result “Periodic Updated”. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-ret-rau-accept-intra	Description: Total number of intra-SGSN routing area update accept messages retransmitted for 3G service. Type: Counter	Int32
2G-ret-rau-accept-intra	Description: Total number of intra-SGSN routing area update accept messages retransmitted for 2G service. Type: Counter	Int32
3G-ret-rau-accept-inter	Description: Total number of inter-SGSN routing area update accept messages retransmitted for 3G service. Type: Counter	Int32
2G-ret-rau-accept-inter	Description: Total number of inter-SGSN routing area update accept messages retransmitted for 2G service. Type: Counter	Int32
3G-ret-rau-accept-periodic	Description: Total number of periodic routing area update accept messages retransmitted for 3G service. Type: Counter	Int32
2G-ret-rau-accept-periodic	Description: Total number of periodic routing area update accept messages retransmitted for 2G service. Type: Counter	Int32
3G-rau-complete	Description: Total number of routing area update complete messages for 3G service. Type: Counter	Int32
2G-rau-complete	Description: Total number of routing area update complete messages for 2G service. Type: Counter	Int32
3G-rau-reject	Description: Total number of routing area update reject messages for 3G service. Type: Counter	Int32
3G-intra-rau-reject	Description: Sum of all RAU-reject counters with individual causes against intra-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per SGSN service, per RA Type: Counter	Int32
3G-periodic-rau-reject	Description: Sum of all RAU-reject counters with individual causes against intra-SGSN-RAU requests of type “Periodic RA Updating” in 3G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per SGSN service, per RA Type: Counter	Int32
3G-inter-rau-reject	Description: Sum of all RAU-reject counters with individual causes against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-comb-rau-reject	Description: Sum of all RAU-reject counters with individual causes against intra-SGSN-RAU requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in 3G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per SGSN service, per RA Type: Counter	Int32
3G-comb-inter-rau-reject	Description: Sum of all RAU-reject counters with individual causes against inter-SGSN-RAU requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in 3G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per SGSN service, per RA Type: Counter	Int32
2G-rau-reject	Description: Total number of routing area update messages rejected for 2G service. Type: Counter	Int32
2G-intra-rau-reject	Description: Sum of all RAU-reject counters with individual causes against intra-SGSN-RAU requests of type “RAU Updating” in 2G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per GPRS service Type: Counter	Int32
2G-periodic-rau-reject	Description: Sum of all RAU-reject counters with individual causes against intra-SGSN-RAU requests of type “Periodic RA Updating” in 2G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per GPRS service Type: Counter	Int32
2G-inter-rau-reject	Description: Sum of all RAU-reject counters with individual causes against inter-SGSN-RAU requests of type “RAU Updating” in 2G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per GPRS service Type: Counter	Int32
2G-comb-rau-reject	Description: Sum of all RAU-reject counters with individual causes against intra-SGSN-RAU requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in 2G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per GPRS service Type: Counter	Int32
2G-comb-inter-rau-reject	Description: Sum of all RAU-reject counters with individual causes against inter-SGSN-RAU requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in 2G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per GPRS service Type: Counter	Int32
3G-rau-rej-imsi-unknown-hlr	This statistic has been deprecated.	Int32
2G-rau-rej-imsi-unknown-hlr	This statistic has been deprecated.	Int32

Variables	Description	Data Type
3G-rau-rej-illegal-ms	This statistic has been deprecated.	Int32
2G-rau-rej-illegal-ms	This statistic has been deprecated.	Int32
3G-rau-rej-illegal-me	This statistic has been deprecated.	Int32
2G-rau-rej-illegal-me	This statistic has been deprecated.	Int32
3G-rau-rej-gprs-svc-not-allow	This statistic has been deprecated.	Int32
2G-rau-rej-gprs-svc-not-allow	This statistic has been deprecated.	Int32
3G-rau-rej-gprs-and-nongprs-svc-not-allow	This statistic has been deprecated.	Int32
2G-rau-rej-gprs-and-nongprs-svc-not-allow	This statistic has been deprecated.	Int32
3G-rau-rej-msid-not-derived-by-nw	This statistic has been deprecated.	Int32
2G-rau-rej-msid-not-derived-by-nw	This statistic has been deprecated.	Int32
3G-rau-rej-implicitly-detach	This statistic has been deprecated.	Int32
2G-rau-rej-implicitly-detach	This statistic has been deprecated.	Int32
3G-rau-rej-plmn-not-allowed	This statistic has been deprecated.	Int32
2G-rau-rej-plmn-not-allowed	This statistic has been deprecated.	Int32
3G-rau-rej-location-area-not-allowed	This statistic has been deprecated.	Int32
2G-rau-rej-location-area-not-allowed	This statistic has been deprecated.	Int32
3G-rau-rej-roam-not-allowed-in-larea	This statistic has been deprecated.	Int32
2G-rau-rej-roam-not-allowed-in-larea	This statistic has been deprecated.	Int32
3G-rau-rej-gprs-svc-not-allowed-in-plmn	This statistic has been deprecated.	Int32

Variables	Description	Data Type
2G-rau-rej-gprs-svc-not-allowed-in-plmn	This statistic has been deprecated.	Int32
3G-rau-rej-no-cells-in-location-area	This statistic has been deprecated.	Int32
2G-rau-rej-no-cells-in-location-area	This statistic has been deprecated.	Int32
3G-rau-rej-msc-not-reachable	This statistic has been deprecated.	Int32
2G-rau-rej-msc-not-reachable	This statistic has been deprecated.	Int32
3G-rau-rej-network-failure	This statistic has been deprecated.	Int32
2G-rau-rej-network-failure	This statistic has been deprecated.	Int32
3G-rau-rej-mac-failure	This statistic has been deprecated.	Int32
2G-rau-rej-mac-failure	This statistic has been deprecated.	Int32
3G-rau-rej-syn-failure	This statistic has been deprecated.	Int32
2G-rau-rej-syn-failure	This statistic has been deprecated.	Int32
3G-rau-rej-congestion	This statistic has been deprecated.	Int32
2G-rau-rej-congestion	This statistic has been deprecated.	Int32
3G-rau-rej-gsm-auth-unacceptable	This statistic has been deprecated.	Int32
2G-rau-rej-gsm-auth-unacceptable	This statistic has been deprecated.	Int32
3G-rau-rej-no-pdp-ctx-actv	This statistic has been deprecated.	Int32
2G-rau-rej-no-pdp-ctx-actv	This statistic has been deprecated.	Int32
3G-rau-rej-retry-from-new-cell	This statistic has been deprecated.	Int32
2G-rau-rej-retry-from-new-cell	This statistic has been deprecated.	Int32

Variables	Description	Data Type
3G-rau-rej-sem-wrong-msg	This statistic has been deprecated.	Int32
2G-rau-rej-sem-wrong-msg	This statistic has been deprecated.	Int32
3G-rau-rej-inval-mand-info	This statistic has been deprecated.	Int32
2G-rau-rej-inval-mand-info	This statistic has been deprecated.	Int32
3G-rau-rej-msg-type-non-exist	This statistic has been deprecated.	Int32
2G-rau-rej-msg-type-non-exist	This statistic has been deprecated.	Int32
3G-rau-rej-mtype-not-compat-prot-state	This statistic has been deprecated.	Int32
2G-rau-rej-mtype-not-compat-prot-state	This statistic has been deprecated.	Int32
3G-rau-rej-ie-non-existent	This statistic has been deprecated.	Int32
2G-rau-rej-ie-non-existent	This statistic has been deprecated.	Int32
3G-rau-rej-cond-ie-error	This statistic has been deprecated.	Int32
2G-rau-rej-cond-ie-error	This statistic has been deprecated.	Int32
3G-rau-rej-msg-not-compat-prot-state	This statistic has been deprecated.	Int32
2G-rau-rej-msg-not-compat-prot-state	This statistic has been deprecated.	Int32
3G-rau-rej-prot-error	This statistic has been deprecated.	Int32
2G-rau-rej-prot-error	This statistic has been deprecated.	Int32
3G-rau-rej-unknown-error	This statistic has been deprecated.	Int32
2G-rau-rej-unknown-error	This statistic has been deprecated.	Int32

Variables	Description	Data Type
3G-intra-rau-rej-imsi-unknown-hlr	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to unknown IMSI in HLR. Type: Counter	Int32
2G-intra-rau-rej-imsi-unknown-hlr	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to unknown IMSI in HLR. Type: Counter	Int32
3G-intra-rau-rej-illegal-ms	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to illegal mobile subscriber. Type: Counter	Int32
2G-intra-rau-rej-illegal-ms	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to illegal mobile subscriber. Type: Counter	Int32
3G-intra-rau-rej-illegal-me	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to illegal mobile equipment. Type: Counter	Int32
2G-intra-rau-rej-illegal-me	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to illegal mobile equipment. Type: Counter	Int32
3G-intra-rau-rej-gprs-svc-not-allw	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to GPRS service not allowed for subscriber. Type: Counter	Int32
2G-intra-rau-rej-gprs-svc-not-allw	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to GPRS service not allowed for subscriber. Type: Counter	Int32
3G-intra-rau-rej-nongprs-svc-not-allow	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber. Type: Counter	Int32
2G-intra-rau-rej-nongprs-svc-not-allow	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber. Type: Counter	Int32
3G-intra-rau-rej-msid-not-derived-by-nw	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to network failed to derive MSID from attach message. Type: Counter	Int32
2G-intra-rau-rej-msid-not-derived-by-nw	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to network failed to derive MSID from attach message. Type: Counter	Int32
3G-intra-rau-rej-implicitly-detach	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to implicitly detach. Type: Counter	Int32
2G-intra-rau-rej-implicitly-detach	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to implicitly detach. Type: Counter	Int32

Variables	Description	Data Type
3G-intra-rau-rej-plmn-not-allowed	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to specific PLMN not allowed. Type: Counter	Int32
2G-intra-rau-rej-plmn-not-allowed	Description: The total intra-SGSN routing area update message rejected in intra-2G roaming due to specific PLMN not allowed. Type: Counter	Int32
3G-intra-rau-rej-loc-area-not-allow	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to specific location area not allowed. Type: Counter	Int32
2G-intra-rau-rej-loc-area-not-allow	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to specific location area not allowed. Type: Counter	Int32
3G-intra-rau-rej-roam-not-allow-larea	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to roaming not allowed in specific location area. Type: Counter	Int32
2G-intra-rau-rej-roam-not-allow-larea	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to roaming not allowed in specific location area. Type: Counter	Int32
3G-intra-rau-rej-gprs-svc-not-allow-plmn	Description: Total number of RAU rejects sent with cause “GPRS service not allowed in this PLMN” against intra-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-intra-rau-rej-gprs-svc-not-allow-plmn	Description: Total number of RAU rejects sent with cause “GPRS service not allowed in this PLMN” against intra-SGSN-RAU requests of type “RA Updating” in 2G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-intra-rau-rej-no-cells-in-loc-area	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to non availability of suitable cell in specific location area. Type: Counter	Int32
2G-intra-rau-rej-no-cells-in-loc-area	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to non availability of suitable cell in specific location area. Type: Counter	Int32
3G-intra-rau-rej-msc-not-reachable	Description: Total number of intra-SGSN routing area update requests rejected for 3G service as MSC not reachable. Type: Counter	Int32
2G-intra-rau-rej-msc-not-reachable	Description: Total number of intra-SGSN routing area update requests rejected for 2G service as MSC not reachable. Type: Counter	Int32

Variables	Description	Data Type
3G-intra-rau-rej-network-failure	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to network failure. Type: Counter	Int32
2G-intra-rau-rej-network-failure	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to network failure. Type: Counter	Int32
3G-intra-rau-rej-mac-failure	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to message authenticate code (MAC) failure. Type: Counter	Int32
2G-intra-rau-rej-mac-failure	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to MAC failure. Type: Counter	Int32
3G-intra-rau-rej-syn-failure	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to context synchronization failure. Type: Counter	Int32
2G-intra-rau-rej-syn-failure	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to context synchronization failure. Type: Counter	Int32
3G-intra-rau-rej-congestion	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to network congestion. Type: Counter	Int32
2G-intra-rau-rej-congestion	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to network congestion. Type: Counter	Int32
3G-intra-rau-rej-gsm-auth-unacceptable	Description: Total number of intra-SGSN routing area update requests rejected for 3G service due to unacceptable authentication from GSM network. Type: Counter	Int32
2G-intra-rau-rej-gsm-auth-unacceptable	Description: Total number of intra-SGSN routing area update requests rejected for 2G service due to unacceptable authentication from GSM network. Type: Counter	Int32
3G-intra-rau-rej-no-pdp-ctx-actv	Description: Total number of intra-SGSN routing area update requests rejected for 3G service as PDP context is not activated. Type: Counter	Int32
2G-intra-rau-rej-no-pdp-ctx-actv	Description: Total number of intra-SGSN routing area update requests rejected for 2G service as PDP context is not activated. Type: Counter	Int32
3G-intra-rau-rej-retry-from-new-cell	Description: Total number of intra-SGSN routing area update requests rejected for 3G service as subscriber retried for update from new cell. Type: Counter	Int32
2G-intra-rau-rej-retry-from-new-cell	Description: Total number of intra-SGSN routing area update requests rejected for 2G service as subscriber retried for update from new cell. Type: Counter	Int32

Variables	Description	Data Type
3G-intra-rau-rej- inval-mand-info	Description: Total number of intra-SGSN routing area update requests rejected for 3 G service as mandatory information in message is invalid. Type: Counter	Int32
2G-intra-rau-rej- inval-mand-info	Description: Total number of intra-SGSN routing area update requests rejected for 2 G service as mandatory information in message is invalid. Type: Counter	Int32
3G-intra-rau-rej- msg-type-non-exist	Description: Total number of intra-SGSN routing area update requests rejected for 3 G service due to non-existent type of message. Type: Counter	Int32
2G-intra-rau-rej- msg-type-non-exist	Description: Total number of intra-SGSN routing area update requests rejected for 2 G service due to non-existent type of message. Type: Counter	Int32
3G-intra-rau-rej- mtype-incompat- pstate	Description: Total number of intra-SGSN routing area update requests rejected for 3 G service as message type is not compatible with protocol state. Type: Counter	Int32
2G-intra-rau-rej- mtype-incompat- pstate	Description: Total number of intra-SGSN routing area update requests rejected for 2 G service as message type is not compatible with protocol state. Type: Counter	Int32
3G-intra-rau-rej-ie- non-existent	Description: Total number of intra-SGSN routing area update requests rejected for 3 G service due to non-existence of information element. Type: Counter	Int32
2G-intra-rau-rej-ie- non-existent	Description: Total number of intra-SGSN routing area update requests rejected for 2 G service due to non-existence of information element. Type: Counter	Int32
3G-intra-rau-rej- cond-ie-error	Description: Total number of intra-SGSN routing area update requests rejected for 3 G service due to error in conditional information element. Type: Counter	Int32
2G-intra-rau-rej- cond-ie-error	Description: Total number of intra-SGSN routing area update requests rejected for 2 G service due to error in conditional information element. Type: Counter	Int32
3G-intra-rau-rej- msg-incompat-prot- state	Description: Total number of intra-SGSN routing area update requests rejected for 3 G service as message type is not compatible with protocol state. Type: Counter	Int32
2G-intra-rau-rej- msg-incompat-prot- state	Description: Total number of intra-SGSN routing area update requests rejected for 2 G service as message type is not compatible with protocol state. Type: Counter	Int32
3G-intra-rau-rej- prot-error	Description: Total number of intra-SGSN routing area update requests rejected for 3 G service due to protocol error in message. Type: Counter	Int32
2G-intra-rau-rej- prot-error	Description: Total number of intra-SGSN routing area update requests rejected for 3 G service due to protocol error in message. Type: Counter	Int32

Variables	Description	Data Type
3G-intra-rau-rej-unknown-error	Description: Total number of intra-SGSN routing area update requests rejected for 3G service where cause is unknown or not specified here. Type: Counter	Int32
2G-intra-rau-rej-unknown-error	Description: Total number of intra-SGSN routing area update requests rejected for 2G service where cause is unknown or not specified here. Type: Counter	Int32
3G-intra-prau-rej-imsi-unknown-hlr	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to unknown IMSI in HLR. Type: Counter	Int32
2G-intra-prau-rej-imsi-unknown-hlr	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to unknown IMSI in HLR. Type: Counter	Int32
3G-intra-prau-rej-illegal-ms	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to illegal mobile subscriber. Type: Counter	Int32
2G-intra-prau-rej-illegal-ms	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to illegal mobile subscriber. Type: Counter	Int32
3G-intra-prau-rej-illegal-me	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to illegal mobile equipment. Type: Counter	Int32
2G-intra-prau-rej-illegal-me	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to illegal mobile equipment. Type: Counter	Int32
3G-intra-prau-rej-gprs-svc-not-allow	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to GPRS service not allowed for subscriber. Type: Counter	Int32
2G-intra-prau-rej-gprs-svc-not-allow	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to GPRS service not allowed for subscriber. Type: Counter	Int32
3G-intra-prau-rej-nongprs-svc-not-allow	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber. Type: Counter	Int32
2G-intra-prau-rej-nongprs-svc-not-allow	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber. Type: Counter	Int32
3G-intra-prau-rej-msid-not-derived-by-nw	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to network failed to derive MSID from attach message. Type: Counter	Int32
2G-intra-prau-rej-msid-not-derived-by-nw	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to network failed to derive MSID from attach message. Type: Counter	Int32

Variables	Description	Data Type
3G-intra-prau-rej-implicitly-detach	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to implicitly detach. Type: Counter	Int32
2G-intra-prau-rej-implicitly-detach	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to implicitly detach. Type: Counter	Int32
3G-intra-prau-rej-plmn-not-allowed	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to specific PLMN not allowed. Type: Counter	Int32
2G-intra-prau-rej-plmn-not-allowed	Description: The total periodic intra-SGSN routing area update message rejected in intra-2G roaming due to specific PLMN not allowed. Type: Counter	Int32
3G-intra-prau-rej-loc-area-not-allowed	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to specific location area not allowed. Type: Counter	Int32
2G-intra-prau-rej-loc-area-not-allowed	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to specific location area not allowed. Type: Counter	Int32
3G-intra-prau-rej-roam-not-allowed-larea	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to roaming not allowed in specific location area. Type: Counter	Int32
2G-intra-prau-rej-roam-not-allowed-larea	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to roaming not allowed in specific location area. Type: Counter	Int32
3G-intra-prau-rej-gprs-svc-not-allowed-plmn	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to GPRS service not allowed in specific PLMN. Type: Counter	Int32
2G-intra-prau-rej-gprs-svc-not-allowed-plmn	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to GPRS service not allowed in specific PLMN. Type: Counter	Int32
3G-intra-prau-rej-no-cells-in-loc-area	Description: Total number of intra-SGSN RAU requests, of type "periodic updating", for 3G service that were rejected with reject messages sent with a cause of "No Suitable Cells In Location Area". Triggers: Increments: - upon receiving a "UMTS access control" message from a Siemens HLR for a sai-req (service area identify request). - when an operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-intra-prau-rej-no-cells-in-loc-area	Description: Total number of intra-SGSN RAU requests, of type “periodic updating”, for 2G service that were rejected where “rau-reject” messages were sent with a cause of “No Suitable Cells In Location Area”. Triggers: Increments: - upon receiving a “UMTS access control” message from a Siemens HLR for a sai-req (service area identify request). - when an operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32
3G-intra-prau-rej-msc-not-reachable	Description: Total number of intra-SGSN RAU requests, of type “periodic updating”, for 3G service that were rejected where “rau-reject” messages were sent with a cause of “MSC temporarily not reachable”. Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-intra-prau-rej-msc-not-reachable	Description: Total number of intra-SGSN RAU requests, of type “periodic updating”, for 2G service that were rejected where “rau-reject” messages were sent with a cause of “MSC temporarily not reachable”. Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32
3G-intra-prau-rej-network-failure	Description: Total number of intra-SGSN RAU requests, of type “period updating”, for 3G service that were rejected where the “rau-reject” message was sent with a cause “Network Failure” Triggers: Increments : - if RNC is overloaded. - if not enough credits at session manager. - upon receiving sai-request with cause of “data missing from hlr” . - if there are too many IU's for the same subscriber. - upon receiving RAU with a peer-sgsn P-TMSI when another attach is ongoing with the same P-TMSI. - when the operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-intra-prau-rej-network-failure	Description: Total number of intra-SGSN RAU requests, of type “period updating”, for 2G service that were rejected where the “rau-reject” message was sent with a cause “Network Failure” Triggers: Increments : - upon receiving a sai-req with cause “data missing from hlr”. - on XID failure for RAU. - if unable to send a “check-imei” request out. - when the operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-intra-prau-rej-mac-failure	Description: Total number of intra-SGSN RAU requests, of type “period updating”, for 3G service that were rejected where the “rau-reject” message was sent with a cause "MAC Failure". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-intra-prau-rej-mac-failure	Description: Total number of intra-SGSN RAU requests, of type “period updating”, for 2G service that were rejected where the “rau-reject” message was sent with a cause "MAC Failure". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32
3G-intra-prau-rej-syn-failure	Description: Total number of intra-SGSN RAU requests, of type “period updating”, for 3G service that were rejected where the “rau-reject” message was sent with a cause "SYNC Failure". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-intra-prau-rej-syn-failure	Description: Total number of intra-SGSN RAU requests, of type “period updating”, for 2G service that were rejected where the “rau-reject” message was sent with a cause "SYNC Failure". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32
3G-intra-prau-rej-congestion	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to network congestion. Type: Counter	Int32
2G-intra-prau-rej-congestion	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to network congestion. Type: Counter	Int32
3G-intra-prau-rej-gsm-auth-unacceptable	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to unacceptable authentication from GSM network. Type: Counter	Int32
2G-intra-prau-rej-gsm-auth-unacceptable	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to unacceptable authentication from GSM network. Type: Counter	Int32
3G-intra-prau-rej-no-pdp-ctx-actv	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service as PDP context is not activated. Type: Counter	Int32
2G-intra-prau-rej-no-pdp-ctx-actv	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service as PDP context is not activated. Type: Counter	Int32
3G-intra-prau-rej-retry-from-new-cell	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service as subscriber retried for update from new cell. Type: Counter	Int32

Variables	Description	Data Type
2G-intra-prau-rej-retry-from-new-cell	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service as subscriber retried for update from new cell. Type: Counter	Int32
3G-intra-prau-rej-sem-wrong-msg	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service as Attach Request message is semantically wrong. Type: Counter	Int32
2G-intra-prau-rej-sem-wrong-msg	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service as Attach Request message is semantically wrong. Type: Counter	Int32
3G-intra-prau-rej-inval-mand-info	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service as mandatory information in message is invalid. Type: Counter	Int32
2G-intra-prau-rej-inval-mand-info	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service as mandatory information in message is invalid. Type: Counter	Int32
3G-intra-prau-rej-msg-type-non-exist	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to non-existent type of message. Type: Counter	Int32
2G-intra-prau-rej-msg-type-non-exist	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to non-existent type of message. Type: Counter	Int32
3G-intra-prau-rej-mtype-incompat-pstate	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service as message type is not compatible with protocol state. Type: Counter	Int32
2G-intra-prau-rej-mtype-incompat-pstate	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service as message type is not compatible with protocol state. Type: Counter	Int32
3G-intra-prau-rej-ie-non-existent	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to non-existence of information element. Type: Counter	Int32
2G-intra-prau-rej-ie-non-existent	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to non-existence of information element. Type: Counter	Int32
3G-intra-prau-rej-cond-ie-error	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to error in conditional information element. Type: Counter	Int32
2G-intra-prau-rej-cond-ie-error	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service due to error in conditional information element. Type: Counter	Int32
3G-intra-prau-rej-msg-incompat-pstate	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service as message type is not compatible with protocol state. Type: Counter	Int32

Variables	Description	Data Type
2G-intra-prau-rej-msg-incompat-pstate	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service as message type is not compatible with protocol state. Type: Counter	Int32
3G-intra-prau-rej-prot-error	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to protocol error in message. Type: Counter	Int32
2G-intra-prau-rej-prot-error	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service due to protocol error in message. Type: Counter	Int32
3G-intra-prau-rej-unknown-error	Description: Total number of periodic intra-SGSN routing area update requests rejected for 3G service where cause is unknown or not specified here. Type: Counter	Int32
2G-intra-prau-rej-unknown-error	Description: Total number of periodic intra-SGSN routing area update requests rejected for 2G service where cause is unknown or not specified here. Type: Counter	Int32
3G-comb-rau-rej-imsi-unknown-hlr	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to unknown IMSI in HLR. Type: Counter	Int32
2G-comb-rau-rej-imsi-unknown-hlr	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to unknown IMSI in HLR. Type: Counter	Int32
3G-comb-rau-rej-illegal-ms	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to illegal mobile subscriber. Type: Counter	Int32
2G-comb-rau-rej-illegal-ms	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to illegal mobile subscriber. Type: Counter	Int32
3G-comb-rau-rej-illegal-me	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to illegal mobile equipment. Type: Counter	Int32
2G-comb-rau-rej-illegal-me	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to illegal mobile equipment. Type: Counter	Int32
3G-comb-rau-rej-gprs-svc-not-allow	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to GPRS service not allowed for subscriber. Type: Counter	Int32
2G-comb-rau-rej-gprs-svc-not-allow	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to GPRS service not allowed for subscriber. Type: Counter	Int32
3G-comb-rau-rej-nongprs-svc-not-allow	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber. Type: Counter	Int32

Variables	Description	Data Type
2G-comb-rau-rej-nongprs-svc-not-allow	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber. Type: Counter	Int32
3G-comb-rau-rej-msid-not-derived-by-nw	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to network failed to derive MSID from attach message. Type: Counter	Int32
2G-comb-rau-rej-msid-not-derived-by-nw	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to network failed to derive MSID from attach message. Type: Counter	Int32
3G-comb-rau-rej-implicitly-detach	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to implicitly detach. Type: Counter	Int32
2G-comb-rau-rej-implicitly-detach	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to implicitly detach. Type: Counter	Int32
3G-comb-rau-rej-plmn-not-allowed	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to specific PLMN not allowed. Type: Counter	Int32
2G-comb-rau-rej-plmn-not-allowed	Description: The total intra-SGSN routing area update message rejected in intra-2G roaming due to specific PLMN not allowed. Type: Counter	Int32
3G-comb-rau-rej-loc-area-not-allowed	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to specific location area not allowed. Type: Counter	Int32
2G-comb-rau-rej-loc-area-not-allowed	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to specific location area not allowed. Type: Counter	Int32
3G-comb-rau-rej-roam-not-allowed-larea	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to roaming not allowed in specific location area. Type: Counter	Int32
2G-comb-rau-rej-roam-not-allowed-larea	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to roaming not allowed in specific location area. Type: Counter	Int32
3G-comb-rau-rej-gprs-svc-not-allowed-plmn	Description: Total number of RAU rejects sent with cause “GPRS service not allowed in this PLMN” against intra-SGSN-RAU requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in 3G service. Triggers: Increment - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-comb-rau-rej-gprs-svc-not-allowed-plmn	Description: Total number of RAU reject messages sent with cause “GPRS service not allowed in this PLMN” against intra-SGSN-RAU requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in 2G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-rau-rej-no-cells-in-loc-area	Description: Total number of intra-SGSN RAU requests for 3G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "No Suitable Cells In Location Area". Triggers: Increments: - upon receiving “UMTS access control” for the SAI-Request from the Siemens HLR. - when the operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-rau-rej-no-cells-in-loc-area	Description: Total number of intra-SGSN RAU requests for 2G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "No Suitable Cells In Location Area". Triggers: Increments: - upon receiving “UMTS access control” for the SAI-Request from the Siemens HLR. - when the operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-rau-rej-msc-not-reachable	Description: Total number of intra-SGSN RAU requests for 3G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "MSC temporarily not reachable". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-rau-rej-msc-not-reachable	Description: Total number of intra-SGSN RAU requests for 2G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "MSC temporarily not reachable". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-comb-rau-rej-network-failure	Description: Total number of intra-SGSN RAU requests for 3G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "MSC temporarily not reachable". Triggers: Increments: - if the RNC is overloaded. - if there is not enough credits at session manager. - upon receiving cause "data missing from hlr" in the SAI-request. - if there are too many IU's for the same subscriber. - upon receiving an RAU with a peer-sgsn P-TMSI when another attach is ongoing with the same P-TMSI. - when the operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-rau-rej-network-failure	Description: Total number of intra-SGSN RAU requests for 2G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "MSC temporarily not reachable". Triggers: Increments - if there is not enough credits at session manager. - upon receiving cause "data missing from hlr" in the SAI-request. - if there are too many IU's for the same subscriber. - upon receiving an RAU with a peer-sgsn P-TMSI when another attach is ongoing with the same P-TMSI. - when the operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-rau-rej-mac-failure	Description: Total number of intra-SGSN RAU requests for 3G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "MAC Failure". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-rau-rej-mac-failure	Description: Total number of intra-SGSN RAU requests for 2G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "MAC Failure". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-rau-rej-syn-failure	Description: Total number of intra-SGSN RAU requests for 3G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "SYNC Failure". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-comb-rau-rej-syn-failure	Description: Total number of intra-SGSN RAU requests for 2G service, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", sent with cause "SYNC Failure". Triggers: Increments when the operator policy is configured with this value as the reject cause for RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-rau-rej-congestion	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to network congestion. Type: Counter	Int32
2G-comb-rau-rej-congestion	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to network congestion. Type: Counter	Int32
3G-comb-rau-rej-gsm-auth-unacceptable	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to unacceptable authentication from GSM network. Type: Counter	Int32
2G-comb-rau-rej-gsm-auth-unacceptable	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to unacceptable authentication from GSM network. Type: Counter	Int32
3G-comb-rau-rej-no-pdp-ctx-actv	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service as PDP context is not activated. Type: Counter	Int32
2G-comb-rau-rej-no-pdp-ctx-actv	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service as PDP context is not activated. Type: Counter	Int32
3G-comb-rau-rej-retry-from-new-cell	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service as subscriber retried for update from new cell. Type: Counter	Int32
2G-comb-rau-rej-retry-from-new-cell	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service as subscriber retried for update from new cell. Type: Counter	Int32
3G-comb-rau-rej-sem-wrong-msg	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service as Attach Request message is semantically wrong. Type: Counter	Int32
2G-comb-rau-rej-sem-wrong-msg	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service as Attach Request message is semantically wrong. Type: Counter	Int32
3G-comb-rau-rej-inval-mand-info	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service as mandatory information in message is invalid. Type: Counter	Int32
2G-comb-rau-rej-inval-mand-info	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service as mandatory information in message is invalid. Type: Counter	Int32

Variables	Description	Data Type
3G-comb-rau-rej-msg-type-non-exist	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to non-existence of information element. Type: Counter	Int32
2G-comb-rau-rej-msg-type-non-exist	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to non-existence of information element. Type: Counter	Int32
3G-comb-rau-rej-mtype-incompat-pstate	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service as message type is not compatible with protocol state. Type: Counter	Int32
2G-comb-rau-rej-mtype-incompat-pstate	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service as message type is not compatible with protocol state. Type: Counter	Int32
3G-comb-rau-rej-ie-non-existent	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to non-existent type of message. Type: Counter	Int32
2G-comb-rau-rej-ie-non-existent	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to non-existent type of message. Type: Counter	Int32
3G-comb-rau-rej-cond-ie-error	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to error in conditional information element. Type: Counter	Int32
2G-comb-rau-rej-cond-ie-error	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to error in conditional information element. Type: Counter	Int32
3G-comb-rau-rej-msg-incompat-pstate	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service as message type is not compatible with protocol state. Type: Counter	Int32
2G-comb-rau-rej-msg-incompat-pstate	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service as message type is not compatible with protocol state. Type: Counter	Int32
3G-comb-rau-rej-prot-error	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service due to protocol error in message. Type: Counter	Int32
2G-comb-rau-rej-prot-error	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service due to protocol error in message. Type: Counter	Int32
3G-comb-rau-rej-unknown-error	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 3G service where cause is unknown or not specified here. Type: Counter	Int32
2G-comb-rau-rej-unknown-error	Description: Total number of combined (GPRS and IMSI) routing area update requests rejected for 2G service where cause is unknown or not specified here. Type: Counter	Int32

Variables	Description	Data Type
3G-inter-rau-rej-imsi-unknown-hlr	Description: Total number of RAU rejects sent with cause "imsi-unknown-in-hlr" against inter-SGSN-RAU requests of type "RA Updating in 3G service." Triggers: Increments - on HLR sending a bad response to an SAI-Req or a GLU-Req. - on receiving zero (0) authorization vectors for HLR for SAI-Req. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service Type: Counter	Int32
2G-inter-rau-rej-imsi-unknown-hlr	Description: Total number of RAU rejects sent with cause "imsi-unknown-in-hlr" against inter-SGSN-RAU requests of type "RA Updating in 2G service." Triggers: Increments - on HLR sending a bad response to an SAI-Req or a GLU-Req. - on receiving zero (0) authorization vectors for HLR for SAI-Req. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-inter-rau-rej-illegal-ms	Description: Total number of RAU rejects sent with cause "illegal-ms" against inter-SGSN-RAU requests of type "RA Updating in 3G service." Triggers: Increments - when an Xres mismatch, followed by identity procedure, results in same IMSI. - upon receiving a bad identity-type for an Identity Request (type IMSI) that was initiated after an Xres mismatch. - after a security command failure. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service Type: Counter	Int32
2G-inter-rau-rej-illegal-ms	Description: Total number of RAU rejects sent with cause "illegal-ms" against inter-SGSN-RAU requests of type "RA Updating in 2G service." Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-inter-rau-rej-illegal-me	Description: Total number of RAU rejects sent with cause "illegal-me" against inter-SGSN-RAU requests of type "RA Updating in 3G service." Triggers: Increments - when unable to retrieve IMEI/IMEISV from the ms. - upon failure of IMEI verification with the EIR. - upon getting unknown equipment failure from EIR/HLR. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-inter-rau-rej-illegal-me	Description: Total number of RAU rejects sent with cause "illegal-me" against inter-SGSN-RAU requests of type "RA Updating in 2G service." Triggers: Increments - upon failure of IMEI verification with the EIR. - upon getting unknown equipment failure from EIR/HLR. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-inter-rau-rej-gprs-svc-not-allow	Description: Total number of RAU rejects sent with cause "gprs-svc-not-allowed" against inter-SGSN-RAU requests of type "RA Updating in 3G service." Triggers: Increments - upon receiving a cl(subs-with) while a RAU/Attach is in progress. - upon receiving Subscriber Unknown failure from the HLR for GLU/SAI-Req. - after rejecting attaches due to subscriber-control-inactivity. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service Type: Counter	Int32
2G-inter-rau-rej-gprs-svc-not-allow	Description: Total number of RAU rejects sent with cause "gprs-svc-not-allowed" against inter-SGSN-RAU requests of type "RA Updating in 2G service." Triggers: Increments - upon receiving a cl(subs-with) while a RAU/Attach is in progress. - upon receiving Subscriber Unknown failure from the HLR for GLU/SAI-Req. - after rejecting attaches due to subscriber-control-inactivity. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-inter-rau-rej-nongprs-svc-not-allow	Description: Total number of RAU rejects sent with cause "nongprs-svc-not-allowed" against inter-SGSN-RAU requests of type "RA Updating in 3G service." Triggers: Increments - upon receiving IMSI-Unknown from HLR in response to SAI-Req/GLU-Req. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service Type: Counter	Int32
2G-inter-rau-rej-nongprs-svc-not-allow	Description: Total number of RAU rejects sent with cause "nongprs-svc-not-allowed" against inter-SGSN-RAU requests of type "RA Updating in 2G service." Triggers: Increments - upon receiving IMSI-Unknown from HLR in response to SAI-Req/GLU-Req. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-inter-rau-rej-msid-not-derived-by-nw	Description: Total number of inter-SGSN routing area update request rejects sent with cause “MSID not derived by network” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments - when PTMSI IE is missing in RAU. - when old RAI has invalid location area values (0x0000 or 0xFFFE) for P-TMSI-attaches/RAU. - when getting a RAU with old RAI in 2G, and P-TMSI is unknown. - when getting P-TMSI-SIG-MISMATCH for an SGSN Context Request sent with IMSI Validated. - when getting a RAU Request while an attach with the same peer-SGSN-P-TMSI is in progress. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-msid-not-derived-by-nw	Description: Total number of inter-SGSN routing area update request rejects sent with cause “MSID not derived by network” against inter-SGSN-RAU requests of type “RA Updating” in 2G service. Triggers: Increments - when SGSN-Context-resp arrives with any cause other than “accepted”. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-inter-rau-rej-implicitly-detach	Description: Total number of RAU rejects sent with cause "implicitly-detach" against inter-SGSN-RAU requests of type “RA Updating in 3G service. Triggers: Increments - upon RAU at 3G when subscriber was detached from 2G. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. - when SGSN receives a different IMSI in an SGSN-Ctx-Rsp for an SGSN-Ctx-Req sent with IMSI-validated. - when SGSN gets RAU while awaiting Detach-Accept. Availability: per SGSN service Type: Counter	Int32
2G-inter-rau-rej-implicitly-detach	Description: Total number of RAU rejects sent with cause "implicitly-detach" against inter-SGSN-RAU requests of type “RA Updating in 2G service. Triggers: Increments - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. - when SGSN receives RAU from an unknown MS. - on t3350 expiry for the Attach-Accept. Availability: per GPRS service Type: Counter	Int32
3G-inter-rau-rej-plmn-not-allowed	Description: Total number of RAU rejects sent with cause "plmn-not-allowed" against inter-SGSN-RAU requests of type “RA Updating in 3G service. Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-inter-rau-rej-plmn-not-allowed	Description: Total number of RAU rejects sent with cause "plmn-not-allowed" against inter-SGSN-RAU requests of type "RA Updating in 2G service." Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-inter-rau-rej-loc-area-not-allowed	Description: Total number of RAU rejects sent with cause "loc-area-not-allowed" against inter-SGSN-RAU requests of type "RA Updating in 3G service." Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service Type: Counter	Int32
2G-inter-rau-rej-loc-area-not-allowed	Description: Total number of RAU rejects sent with cause "loc-area-not-allowed" against inter-SGSN-RAU requests of type "RA Updating in 2G service." Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-inter-rau-rej-roam-not-allowed-larea	Description: Total number of RAU rejects sent with cause "roam-not-allowed-in-location-area" against inter-SGSN-RAU requests of type "RA Updating in 3G service." Triggers: Increments - when rejecting as a shared-SGSN because no operator accepts the given IMSI. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service Type: Counter	Int32
2G-inter-rau-rej-roam-not-allowed-larea	Description: Total number of RAU rejects sent with cause "roam-not-allowed-in-location-area" against inter-SGSN-RAU requests of type "RA Updating in 2G service." Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-inter-rau-rej-gprs-svc-not-allowed-plmn	Description: Total number of RAU rejects sent with cause "GPRS service not allowed in this PLMN" against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments - on getting "Roaming not allowed" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-gprs-svc-not-allowed-plmn	Description: Total number of RAU rejects sent with cause "GPRS service not allowed in this PLMN" against inter-SGSN-RAU requests of type "RA Updating" in 2G service. Triggers: Increments - on getting "Roaming not allowed" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-inter-rau-rej-no-cells-in-location-area	Description: Total number of RAU rejects sent with cause “no-cells-in-location-area” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments - on getting “UMTS access control” from a Siemens HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-no-cells-in-location-area	Description: Total number of RAU rejects sent with cause “no-cells-in-location-area” against inter-SGSN-RAU requests of type “RA Updating” in 2G service. Triggers: Increments - on getting “UMTS access control” from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-msc-not-reachable	Description: Total number of RAU rejects sent with cause “msc-not-reachable” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments - on sending an Attach/RAU Accept with cause GPRS only attached” or RA Updated” for a combined CS/PS request either because: • request timed out • inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-msc-not-reachable	Description: Total number of RAU rejects sent with cause “msc-not-reachable” against inter-SGSN-RAU requests of type “RA Updating” in 2G service. Triggers: Increments - on sending an Attach/RAU Accept with cause GPRS only attached” or RA Updated” for a combined CS/PS request either because: • request timed out • inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-network-failure	Description: Total number of RAU rejects sent with cause “network-failure” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments when - RNC is overloaded. - not enough credits with Session Manager. - on receiving cause “data missing from HLR” in SAI-Req/GLU-Req. - when there are too many Ius for the same IMSI. - when getting a RAU with a peer-SGSN PTMSI when another Attach is ongoing with the same PTMSI. - on congestion, when configured for attach-throttling. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-inter-rau-rej-network-failure	Description: Total number of RAU rejects sent with cause “network-failure” against inter-SGSN-RAU requests of type “RA Updating” in 2G service. Triggers: Increments - on receiving cause “data missing from HLR” in SAI-Req/GLU-Req. - on receiving XID failure for RAU. - SGSN unable to send an SGSN-Ctx-Req for a RAU. - SGSN unable to send a Check-IMEI Request. - on congestion, when configured for attach-throttling. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-mac-failure	Description: Total number of RAU rejects sent with cause “mac-failure” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-mac-failure	Description: Total number of RAU rejects sent with cause “mac-failure” against inter-SGSN-RAU requests of type “RA Updating” in 2G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-syn-failure	Description: Total number of RAU rejects sent with cause “syn-failure” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-syn-failure	Description: Total number of RAU rejects sent with cause “syn-failure” against inter-SGSN-RAU requests of type “RA Updating” in 2G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-congestion	Description: Total number of RAU rejects sent with cause “congestion” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-congestion	Description: Total number of RAU rejects sent with cause “congestion” against inter-SGSN-RAU requests of type “RA Updating” in 2G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-inter-rau-rej-gsm-auth-unacceptable	Description: Total number of RAU rejects sent with cause “gsm-auth-unacceptable” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-gsm-auth-unacceptable	Description: Total number of RAU rejects sent with cause “gsm-auth-unacceptable” against inter-SGSN-RAU requests of type “RA Updating” in 2G service. Triggers: When the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-no-pdp-ctx-actv	Description: Total number of RAU rejects sent with cause “no-pdp-ctx-actvated” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-no-pdp-ctx-actv	Description: Total number of RAU rejects sent with cause “no-pdp-ctx-actvated” against inter-SGSN-RAU requests of type “RA Updating” in 32G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-retry-from-new-cell	Description: Total number of RAU rejects sent with cause “retry-from-new-cell” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-retry-from-new-cell	Description: Total number of RAU rejects sent with cause “retry-from-new-cell” against inter-SGSN-RAU requests of type “RA Updating” in 32G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-sem-wrong-msg	Description: Total number of RAU rejects sent with cause “sem-wrong-msg” against inter-SGSN-RAU requests of type “RA Updating” in 3G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-inter-rau-rej-sem-wrong-msg	Description: Total number of RAU rejects sent with cause "sem-wrong-msg" against inter-SGSN-RAU requests of type "RA Updating" in 2G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-inval-mand-info	Description: Total number of RAU rejects sent with cause "invalid-mandatory-info" against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-inval-mand-info	Description: Total number of RAU rejects sent with cause "invalid-mandatory-info" against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
3G-inter-rau-rej-msg-type-non-exist	Description: Total number of RAU rejects sent with cause "msg-type-doesn't-exist" against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-msg-type-non-exist	Description: Total number of RAU rejects sent with cause "msg-type-doesn't-exist" against inter-SGSN-RAU requests of type "RA Updating" in 2G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-mtype-incompat-pstate	Description: Total number of RAU rejects sent with cause "msg-type-incompatible-with-protocol-state" against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-inter-rau-rej-mtype-incompat-pstate	Description: Total number of RAU rejects sent with cause "msg-type-incompatible-with-protocol-state" against inter-SGSN-RAU requests of type "RA Updating" in 2G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-ie-non-existent	Description: Total number of RAU rejects sent with cause "ie-non-existent" against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-ie-non-existent	Description: Total number of RAU rejects sent with cause "ie-non-existent" against inter-SGSN-RAU requests of type "RA Updating" in 2G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-cond-ie-error	Description: Total number of RAU rejects sent with cause "cond-ie-error" against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-cond-ie-error	Description: Total number of RAU rejects sent with cause "cond-ie-error" against inter-SGSN-RAU requests of type "RA Updating" in 2G service. Triggers: Increments - on decode failure of messages. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-msg-not-compat-pstate	Description: Total number of RAU rejects sent with cause "msg-not-compatible-with-protocol-state" against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments - when SGSN receives an Attach-Request before getting a Relocation-Complete during SRNS - when SGSN gets periodic RAU in a Dir-Transfer message. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-inter-rau-rej-msg-not-compat-pstate	Description: Total number of RAU rejects sent with cause "msg-not-compatible-with-protocol-state" against inter-SGSN-RAU requests of type "RA Updating" in 2G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-prot-error	Description: Total number of RAU rejects sent with cause "protocol-error" against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-prot-error	Description: Total number of RAU rejects sent with cause "protocol-error" against inter-SGSN-RAU requests of type "RA Updating" in 2G service. Triggers: Increments - when the PLMN-ID in the BSSGP message does not match the PLMN in the GPRS Service configuration. - when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-inter-rau-rej-unknown-error	Description: Total number of RAU rejects sent with any cause, other than those listed above, against inter-SGSN-RAU requests of type "RA Updating" in 3G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-rau-rej-unknown-error	Description: Total number of RAU rejects sent with any cause, other than those listed above, against inter-SGSN-RAU requests of type "RA Updating" in 2G service. Triggers: Increments when the operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-irau-rej-imsi-unknown-hlr	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to unknown IMSI in HLR. Type: Counter	Int32
2G-comb-irau-rej-imsi-unknown-hlr	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to unknown IMSI in HLR. Type: Counter	Int32
3G-comb-irau-rej-illegal-ms	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to illegal mobile subscriber. Type: Counter	Int32
2G-comb-irau-rej-illegal-ms	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to illegal mobile subscriber. Type: Counter	Int32

Variables	Description	Data Type
3G-comb-irau-rej-illegal-me	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to illegal mobile equipment. Type: Counter	Int32
2G-comb-irau-rej-illegal-me	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to illegal mobile equipment. Type: Counter	Int32
3G-comb-irau-rej-gprs-svc-not-allow	Description: Total number of inter-SGSN routing area update request rejects sent with cause "GPRS services not allowed in this PLMN" against inter-SGSN-RAU requests of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach" in 3G service. Triggers: Increments - on getting "Roaming not allowed" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-irau-rej-gprs-svc-not-allow	Description: Total number of inter-SGSN routing area update request rejects sent with cause "GPRS services not allowed in this PLMN" against inter-SGSN-RAU requests of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach" in 2G service. Triggers: Increments - on getting "Roaming not allowed" from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-irau-rej-nongprs-svc-not-allow	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber. Type: Counter	Int32
2G-comb-irau-rej-nongprs-svc-not-allow	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber. Type: Counter	Int32
3G-comb-irau-rej-msid-not-derived-by-nw	Description: Total number of inter-SGSN routing area update request rejects sent with cause "MSID not derived by network" against inter-SGSN-RAU requests of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach" in 3G service. Triggers: Increments - when PTMSI IE is missing in RAU. - when old RAI has invalid location area values (0x0000 or 0xFFFE) for P-TMSI-attaches/RAU. - when getting a RAU with old RAI in 2G, and P-TMSI is unknown. - when getting P-TMSI-SIG-MISMATCH for an SGSN Context Request sent with IMSI Validated. - when getting a RAU Request while an attach with the same peer-SGSN-P-TMSI is in progress. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-comb-irau-rej-msid-not-derived-by-nw	Description: Total number of inter-SGSN routing area update request rejects sent with cause “MSID not derived by network” against inter-SGSN-RAU requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in 2G service. Triggers: Increments - when SGSN-Context-resp arrives with any cause other than “accepted”. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-irau-rej-implicitly-detach	Description: Total number of RAU Rejects sent with cause “implicitly-detach” against inter-SGSN-RAU Requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in the 3G service Triggers: Increments - when RAU at 3G subscriber was detached from 2G. - when the SGSN receives a different IMSI in an SGSN-CTX-RSP for an SGSN-CTX-REQ sent with IMSI-validated. - when the SGSN receives RAU while awaiting Detach-Accept. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-irau-rej-implicitly-detach	Description: Total number of RAU Rejects sent with cause “implicitly-detach” against inter-SGSN-RAU Requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in the 2G service Triggers: Increments - when the SGSN receives RAU from an unknown MS. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-irau-rej-plmn-not-allowed	Description: Total number of RAU Rejects sent with cause “plmn-not-allowed” against inter-SGSN-RAU Requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in the 3G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-irau-rej-plmn-not-allowed	Description: Total number of RAU Rejects sent with cause “plmn-not-allowed” against inter-SGSN-RAU Requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in the 2G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-irau-rej-loc-area-not-allowed	Description: Total number of RAU Rejects sent with cause “loc-area-not-allowed” against inter-SGSN-RAU Requests of type “Combined RA/LA update” or “Combined RA/LA update with IMSI Attach” in the 3G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-comb-irau-rej-loc-area-not-allowed	Description: Total number of RAU Rejects sent with cause “loc-area-not-allowed” against inter-SGSN-RAU Requests of type "Combined RA/LA update" or “Combined RA/LA update with IMSI Attach” in the 2G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-irau-rej-roam-not-allowed-loc-area	Description: Total number of RAU Rejects sent with cause “roaming-not-allowed-in-location-area” against inter-SGSN-RAU Requests of type "Combined RA/LA update" or “Combined RA/LA update with IMSI Attach” in the 3G service Triggers: Increments - when rejecting as a shared SGSN because no operator is accepting the provided IMSI. - when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-irau-rej-roam-not-allowed-larea	Description: Total number of RAU Rejects sent with cause “roaming-not-allowed-in-location-area” against inter-SGSN-RAU Requests of type "Combined RA/LA update" or “Combined RA/LA update with IMSI Attach” in the 2G service Triggers: Increments when an operator policy is configured with this value as the reject cause for Attaches/RAUs. Availability: per GPRS service, per RA Type: Counter	Int32
3G-comb-irau-rej-gprs-svc-not-allowed-plmn	Description: Total number of RAU rejects sent with cause "GPRS service not allowed in PLMN" against inter-SGSN-RAU requests of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach" in 3G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per SGSN service, per RA Type: Counter	Int32
2G-comb-irau-rej-gprs-svc-not-allowed-plmn	Description: Total number of RAU rejects sent with cause "GPRS service not allowed in PLMN" against inter-SGSN-RAU requests of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach" in 2G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req. - when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per GPRS service Type: Counter	Int32
3G-comb-irau-rej-no-cells-in-location-area	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to non availability of suitable cell in specific location area. Type: Counter	Int32
2G-comb-irau-rej-no-cells-in-location-area	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to non availability of suitable cell in specific location area. Type: Counter	Int32
3G-comb-irau-rej-msc-not-reachable	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service as MSC not reachable. Type: Counter	Int32

Variables	Description	Data Type
2G-comb-irau-rej-msc-not-reachable	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service as MSC not reachable. Type: Counter	Int32
3G-comb-irau-rej-network-failure	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to network failure. Type: Counter	Int32
2G-comb-irau-rej-network-failure	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to network failure. Type: Counter	Int32
3G-comb-irau-rej-mac-failure	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to message authenticate code (MAC) failure. Type: Counter	Int32
2G-comb-irau-rej-mac-failure	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to MAC failure. Type: Counter	Int32
3G-comb-irau-rej-syn-failure	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to context synchronization failure. Type: Counter	Int32
2G-comb-irau-rej-syn-failure	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to context synchronization failure. Type: Counter	Int32
3G-comb-irau-rej-congestion	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to network congestion. Type: Counter	Int32
2G-comb-irau-rej-congestion	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to network congestion. Type: Counter	Int32
3G-comb-irau-rej-gsm-auth-unacceptable	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to unacceptable authentication from GSM network. Type: Counter	Int32
2G-comb-irau-rej-gsm-auth-unacceptable	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to unacceptable authentication from GSM network. Type: Counter	Int32
3G-comb-irau-rej-no-pdp-ctx-actv	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service as PDP context is not activated. Type: Counter	Int32
2G-comb-irau-rej-no-pdp-ctx-actv	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service as PDP context is not activated. Type: Counter	Int32
3G-comb-irau-rej-retry-from-new-cell	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service as subscriber retried for update from new cell. Type: Counter	Int32

Variables	Description	Data Type
2G-comb-irau-rej-retry-from-new-cell	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service as subscriber retried for update from new cell. Type: Counter	Int32
3G-comb-irau-rej-sem-wrong-msg	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service as Attach Request message is semantically wrong. Type: Counter	Int32
2G-comb-irau-rej-sem-wrong-msg	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service as Attach Request message is semantically wrong. Type: Counter	Int32
3G-comb-irau-rej-inval-mand-info	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service as mandatory information in message is invalid. Type: Counter	Int32
2G-comb-irau-rej-inval-mand-info	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service as mandatory information in message is invalid. Type: Counter	Int32
3G-comb-irau-rej-msg-type-non-exist	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to non-existent type of message. Type: Counter	Int32
2G-comb-irau-rej-msg-type-non-exist	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to non-existent type of message. Type: Counter	Int32
3G-comb-irau-rej-mtype-incompat-pstate	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service as message type is not compatible with protocol state. Type: Counter	Int32
2G-comb-irau-rej-mtype-incompat-pstate	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service as message type is not compatible with protocol state. Type: Counter	Int32
3G-comb-irau-rej-ie-non-existent	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to non-existence of information element. Type: Counter	Int32
2G-comb-irau-rej-ie-non-existent	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to non-existence of information element. Type: Counter	Int32
3G-comb-irau-rej-cond-ie-error	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to error in conditional information element. Type: Counter	Int32
2G-comb-irau-rej-cond-ie-error	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service due to error in conditional information element. Type: Counter	Int32
3G-comb-irau-rej-msg-not-compat-pstate	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service as message type is not compatible with protocol state. Type: Counter	Int32

Variables	Description	Data Type
2G-comb-irau-rej-msg-not-compat-pstate	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service as message type is not compatible with protocol state. Type: Counter	Int32
3G-comb-irau-rej-prot-error	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to protocol error in message. Type: Counter	Int32
2G-comb-irau-rej-prot-error	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service due to protocol error in message. Type: Counter	Int32
3G-comb-irau-rej-unknown-error	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 3G service where cause is unknown or not specified here. Type: Counter	Int32
2G-comb-irau-rej-unknown-error	Description: Total number of combined (GPRS and IMSI) inter-SGSN routing area update requests rejected for 2G service where cause is unknown or not specified here. Type: Counter	Int32
3G-total-rau-failure	Description: Total number of routing area updates failed for 3G service. Type: Counter	Int32
2G-total-rau-failure	Description: Total number of routing area updates failed for 2G service. Type: Counter	Int32
3G-total-intra-rau-failure	Description: This proprietary counter indicates the total number of intra-SGSN-RAU requests of type “RA Updating” that were dropped from processing in 3G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this Attach, was received and pre-empted existing Attach procedure. Availability: per SGSN service, per RA Type: Counter	Int32
2G-total-intra-rau-failure	Description: This proprietary counter indicates the total number of intra-SGSN-RAU requests of type “RA Updating” that were dropped from processing in 2G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this Attach, was received and pre-empted existing Attach procedure. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-total-periodic-rau-failure	Description: This proprietary counter indicates the total number of intra-SGSN-RAU requests of type “Periodic Updating” that were dropped from processing in 3G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this attach, was received and pre-empted existing Attach procedure. - Iu released while attach procedure in progress. Availability: per SGSN service, per RA Type: Counter	Int32
2G-total-periodic-rau-failure	Description: This proprietary counter indicates the total number of intra-SGSN RAU requests, of type “Periodic Updating”, that were dropped from processing in 2G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this attach, was received and pre-empted existing Attach procedure. Availability: per GPRS service Type: Counter	Int32
3G-total-intra-rau-failure-comb	Description: This proprietary counter indicates the total number of inter-SGSN RAU requests, of type “Combined RA/LA Update or “Combined RA/LA Update with IMSI Attach”, that were failed in 3G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this attach, was received and pre-empted existing Attach procedure. 3) Iu released while attach procedure in progress. Availability: per SGSN service, per RA Type: Counter	Int32
2G-total-intra-rau-failure-comb	Description: This proprietary counter indicates the total number of inter-SGSN-RAU requests of type “Combined RA/LA Update or “Combined RA/LA Update with IMSI Attach” that were failed in 3G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this attach, was received and pre-empted existing Attach procedure. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-total-inter-rau-failure	Description: This proprietary counter indicates the total number of inter-SGSN-RAU requests of type “RA Updating” that were failed in 3G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this attach, was received and pre-empted existing Attach procedure. - Iu released while attach procedure in progress. Availability: per SGSN service, per RA Type: Counter	Int32
2G-total-inter-rau-failure	Description: This proprietary counter indicates the total number of inter-SGSN-RAU requests of type “RA Updating” that were failed in 2G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this attach, was received and pre-empted existing Attach procedure. Availability: per GPRS service Type: Counter	Int32
3G-total-comb-inter-rau-failure	Description: This proprietary counter indicates the total number of inter-SGSN-RAU requests of type “Combined RA/LA Update or “Combined RA/LA Iupdate with IMSI Attach” that were failed in 3G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this attach, was received and pre-empted existing Attach procedure. - Iu released while attach procedure was in progress. Availability: per SGSN service, per RA Type: Counter	Int32
2G-total-comb-inter-rau-failure	Description: This proprietary counter indicates the total number of inter-SGSN-RAU requests of type “Combined RA/LA Update or “Combined RA/LA Iupdate with IMSI Attach” that were failed in 2G service. “Dropped” indicates that the requests were silently discarded and no reject was sent for such requests. Triggers: Increments when - another RAU, differing from this RAU, was received and pre-empted existing RAU procedure. - another Attach, differing from this attach, was received and pre-empted existing Attach procedure. Availability: per GPRS service Type: Counter	Int32
3G-intra-ra-upd-rau-fail-iu_release	Description: Total number of intra-SGSN routing area updates failed for 3G service due to Iu released. Type: Counter	Int32
3G-intra-ra-upd-rau-fail-ongoing-proc	Description: Total number of intra-SGSN routing area updates failed for 3G service due ongoing procedures. Type: Counter	Int32

Variables	Description	Data Type
2G-intra-ra-upd-rau-fail-ongoing-proc	Description: Total number of intra-SGSN routing area updates failed for 2G service due ongoing procedures. Type: Counter	Int32
3G-intra-perio-rau-fail-iu_release	Description: Total number of intra-SGSN periodic routing area updates failed for 3G service due Iu released. Type: Counter	Int32
3G-intra-perio-rau-fail-ongoing-proc	Description: Total number of intra-SGSN periodic routing area updates failed for 3G service due ongoing procedures. Type: Counter	Int32
2G-intra-perio-rau-fail-ongoing-proc	Description: Total number of intra-SGSN periodic routing area updates failed for 2G service due ongoing procedures. Type: Counter	Int32
3G-inter-rau-fail-iu_release	Description: Total number of inter-SGSN periodic routing area updates failed for 3G service due Iu released. Type: Counter	Int32
3G-inter-rau-fail-ongoing-proc	Description: Total number of inter-SGSN periodic routing area updates failed for 3G service due ongoing procedures. Type: Counter	Int32
2G-inter-rau-fail-ongoing-proc	Description: Total number of inter-SGSN periodic routing area updates failed for 2G service due ongoing procedures. Type: Counter	Int32
3G-intra-comb-rau-fail-iu_release	Description: Total number of combined RAUs dropped from processing as the Iu (in which the RAU came) was released. This counter is new in release 9.0. Triggers: Increments when the Iu releases during an ongoing RAU. Availability: per SGSN service, per RA Type: Counter	Int32
3G-intra-comb-rau-fail-ongoing-proc	Description: Total number of combined RAUs dropped from processing as another RAU/Attach/Detach was received. This counter is new in release 9.0. Triggers: Increments when another Attach/RAU/Detach is received. Availability: per SGSN service, per RA Type: Counter	Int32
2G-intra-comb-rau-fail-ongoing-proc	Description: Total number of combined RAUs dropped from processing as another RAU/Attach/Detach was received. This counter is new in release 9.0. Triggers: Increments when another Attach/RAU/Detach is received. Availability: per GPRS service Type: Counter	Int32
3G-inter-comb-rau-fail-iu_release	Description: Total number of combined inter-SGSN RAUs dropped from processing as the Iu (in which the RAU came) was released. This counter is new in release 9.0. Triggers: Increments when the Iu releases during an ongoing RAU. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-inter-comb-rau-fail-ongoing-proc	Description: Total number of combined inter-SGSN RAUs dropped from processing as another RAU/Attach/Detach was received. This counter is new in release 9.0. Triggers: Increments when another Attach/RAU/Detach is received. Availability: per SGSN service, per RA Type: Counter	Int32
2G-inter-comb-rau-fail-ongoing-proc	Description: Total number of combined inter-SGSN RAUs dropped from processing as another RAU/Attach/Detach was received. This counter is new in release 9.0. Triggers: Increments when another Attach/RAU/Detach is received. Availability: per GPRS service Type: Counter	Int32
intra-sgsn-inter-system-gsm-to-wcdma-success	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of Attach and RAU Requests received at 3G from 2G mobile stations (MS) attached in the same SGSN. Triggers: Increments when a Mobile Station (MS) performs an intra-SGSN inter-RAT Attach/RAU from 2G to 3G. Availability: Across all SGSN services Type: Counter	Int32
intra-sgsn-inter-system-gsm-to-wcdma-rej	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of Attach/RAU Rejects sent against Attach/RAU Requests received at 3G from 2G mobile stations (MS) attached in the same SGSN. Triggers: Increments when an Attach/RAU procedure is rejected on an intra-SGSN inter-RAT Attach/RAU Request from 2G to 3G. Availability: Across all SGSN services Type: Counter	Int32
intra-sgsn-inter-system-gsm-to-wcdma-fail	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of failed Attach/RAU Procedures initiated at 3G from 2G mobile stations (MS) attached in the same SGSN. Triggers: Increments when an Attach/RAU procedure is dropped without an Attach/RAU Reject on an intra-SGSN inter-RAT from 2G to 3G. Availability: Across all SGSN services Type: Counter	Int32
intra-sgsn-inter-system-wcdma-to-gsm-success	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU and Attach Requests received at 2G from 3G mobile stations (MS) attached in the same SGSN. Triggers: Increments when a Mobile Station (MS) performs an intra-SGSN inter-RAT Attach/RAU from 3G to 2G. Availability: Across all GPRS services Type: Counter	Int32
intra-sgsn-inter-system-wcdma-to-gsm-rej	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of Attach/RAU Rejects sent against Attach/RAU Requests received at 2G from 3G mobile stations (MS) attached in the same SGSN. Triggers: Increments when an Attach/RAU procedure is rejected on an intra-SGSN inter-RAT Attach/RAU Request from 3G to 2G. Availability: Across all GPRS services Type: Counter	Int32

Variables	Description	Data Type
intra-sgsn-inter-system-wcdma-to-gsm-fail	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of failed Attach/RAU Procedures initiated at 2G from 3G mobile stations (MS) attached in the same SGSN. Triggers: Increments when an Attach/RAU procedure is dropped without an Attach/RAU Reject on an intra-SGSN inter-RAT from 3G to 2G. Availability: Across all GPRS services Type: Counter	Int32
inter-system-2G-to-3G-rau-requests	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-requests of type "RA Updating" received from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon reception of a RAU-request at the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-rau-accepts	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-accepts with update-result - "RA updated" issued against RAU-requests from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon issue of such a RAU-accept message at the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-rau-rejects	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-rejects issued against RAU-requests of the type "RA Updating" which were received from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon issue of such a RAU-reject message by the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-comb-rau-requests	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-requests, of type "Combined RA/LA update" or "Combined RA/LA update, with IMSI Attach" received from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon reception of such a RAU-request message at the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-comb-rau-accepts	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-accepts, with update-result - "Combined RA/LA updated", issued against RAU-requests from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon issue of such RAU-accept message at the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-comb-rau-rejects	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-rejects, issued against RAU-requests of the type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", received from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon issue of such a RAU-reject message at the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
inter-system-2G-to-3G-attach-requests	Description: Total number of attach-request messages, of the type "GPRS Attach", received from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon reception of such an attach-request message at the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-attach-accepts	Description: Total number of attach-accepts of type "GPRS only attached" issued against attach-requests from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon issue of such an attach-accept message at the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-attach-rejects	Description: Total number of attach-reject messages, issued against attach-requests of type "GPRS Attach", received from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon issue of such an attach-reject message from the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-comb-attach-requests	Description: Total number of attach-request messages, of type "Combined GPRS/IMSI Attach", received from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon reception of such attach-request messages at the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-comb-attach-accepts	Description: Total number of attach-accept messages, of the type "Combined GPRS/IMSI attached", issued against attach-requests from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon issue of such an attach-accept message by the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-2G-to-3G-comb-attach-rejects	Description: Total number of attach-reject messages, issued against attach-requests of type "Combined GPRS/IMSI Attach", received from subscribers who attached previously to the same SGSN under 2G. Triggers: Increments upon issue of such an attach-reject message by the 3G SGSN. Availability: per SGSN service, per RA Type: Counter	Int32
inter-system-3G-to-2G-rau-requests	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-request messages, of type "RA Updating", received from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon reception of such a RAU-request message at the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
inter-system-3G-to-2G-rau-accepts	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-accept messages, with update-result - "RA updated", issued against RAU-requests from subscribers who previously attached to the same SGSN under 3G. Triggers: Increments upon issue of such a RAU-accept message by the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32

Variables	Description	Data Type
inter-system-3G-to-2G-rau-rejects	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-reject messages, issued against RAU-requests of type "Ra Updating", received from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon issue of such a RAU-reject message by the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
inter-system-3G-to-2G-comb-rau-requests	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-request messages, of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", received from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon reception of such a RAU-request message by the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
inter-system-3G-to-2G-comb-rau-accepts	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-accept messages, with update-result - "Combined RA/LA updated", issued against RAU-requests from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon issue of such a RAU-accept message by the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
inter-system-3G-to-2G-comb-rau-rejects	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of RAU-reject messages, issued against RAU-requests of type "Combined RA/LA update" or "Combined RA/LA update with IMSI Attach", received from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon issue of such a RAU-reject message by the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
inter-system-3G-to-2G-attach-requests	Description: Total number of "Attach Request" messages, of type "GPRS Attach", received from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon reception of such an "Attach Request" message at the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
inter-system-3G-to-2G-attach-accepts	Description: Total number of "attach-accept" messages, of type "GPRS only attached", issued against "attach-requests" from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon issue of such an "attach-accept" message at the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
inter-system-3G-to-2G-attach-rejects	Description: Total number of "attach-reject" messages, issued against "attach-requests" of type "GPRS Attach", received from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon issue of such an "attach-reject" message by the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32

Variables	Description	Data Type
inter-system-3G-to-2G-comb-attach-requests	Description: Total number of “attach-request” messages, of type "Combined GPRS/IMSI Attach", received from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon reception of such an “attach-request” message by the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
inter-system-3G-to-2G-comb-attach-accepts	Description: Total number of “attach-accept” messages, of type "Combined GPRS/IMSI attached", issued against “attach-requests” from subscribers who attached previously to the same SGSN under 3G. Triggers: Increments upon reception of such an “attach-request” message by the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
inter-system-3G-to-2G-comb-attach-rejects	Description: Total number of Attach rejects issued against attach-requests of type "Combined GPRS/IMSI Attach" received from subscribers who are previously attached in the same sgsn under 3g. Triggers: Increments upon issue of such an “attach-reject” by the 2G SGSN. Availability: across all GPRS services Type: Counter	Int32
ps-inter-rat-rau-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of GPRS only Inter RAT RAU Requests received in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ps-inter-rat-rau-3g	Description: Total number of GPRS only Inter RAT RAU Requests received in a 3G service from a 2G service. Availability: per RA, per SGSN service Type: Counter	Int32
ps-inter-rat-rau-2g	Description: Total number of GPRS only Inter RAT RAU Requests received in a 2G service from a 3G service. Availability: per RA, per GPRS service Type: Counter	Int32
comb-inter-rat-rau-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of Combined Inter RAT RAU Requests received in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
comb-inter-rat-rau-3g	Description: Total number of Combined Inter RAT RAU Requests received in a 3G service from a 2G service. Availability: per RA, per SGSN service Type: Counter	Int32
comb-inter-rat-rau-2g	Description: Total number of Combined Inter RAT RAU Requests received in a 2G service from a 3G service. Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
ret-ps-inter-rat-rau-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of retransmitted GPRS only Inter RAT RAU Requests received in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ret-ps-inter-rat-rau-3g	Description: Total number of retransmitted GPRS only Inter RAT RAU Requests received in a 3G service from a 2G service. Availability: per RA, per SGSN service Type: Counter	Int32
ret-ps-inter-rat-rau-2g	Description: Total number of retransmitted GPRS only Inter RAT RAU Requests received in a 2G service from a 3G service. Availability: per RA, per GPRS service Type: Counter	Int32
ret-comb-inter-rat-rau-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of retransmitted Combined Inter RAT RAU Requests received in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ret-comb-inter-rat-rau-3g	Description: Total number of retransmitted Combined Inter RAT RAU Requests received in a 3G service from a 2G service. Availability: per RA, per SGSN service Type: Counter	Int32
ret-comb-inter-rat-rau-2g	Description: Total number of retransmitted Combined Inter RAT RAU Requests received in a 2G service from a 3G service. Availability: per RA, per GPRS service Type: Counter	Int32
ps-inter-service-rau-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of GPRS only Inter Service RAU Requests received in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ps-inter-service-rau-3g	Description: Total number of GPRS only Inter Service RAU Requests from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
ps-inter-service-rau-2g	Description: Total number of GPRS only Inter Service RAU Requests from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
comb-inter-service-rau-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of Combined Inter Service RAU Requests received in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32

Variables	Description	Data Type
comb-inter-service-rau-3g	Description: Total number of Combined Inter Service RAU Requests from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
comb-inter-service-rau-2g	Description: Total number of Combined Inter Service RAU Requests from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
ret-ps-inter-service-rau-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of retransmitted GPRS only Inter Service RAU Requests received in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ret-ps-inter-service-rau-3g	Description: Total number of retransmitted GPRS only Inter Service RAU Requests from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
ret-ps-inter-service-rau-2g	Description: Total number of retransmitted GPRS only Inter Service RAU Requests from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
ret-comb-inter-service-rau-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of retransmitted Combined Inter Service RAU Requests received in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ret-comb-inter-service-rau-3g	Description: Total number of retransmitted Combined Inter Service RAU Requests from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
ret-comb-inter-service-rau-2g	Description: Total number of retransmitted Combined Inter Service RAU Requests from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
ps-inter-rat-rau-acc-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of GPRS only Inter RAT RAU Accepts sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ps-inter-rat-rau-acc-3g	Description: Total number of GPRS only Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 2G service to a 3G service. Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
ps-inter-rat-rau-acc-2g	Description: Total number of GPRS only Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 3G service to a 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
comb-inter-rat-rau-acc-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of Combined Inter RAT RAU Accepts sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
comb-inter-rat-rau-acc-3g	Description: Total number of Combined Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 2G service to a 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
comb-inter-rat-rau-acc-2g	Description: Total number of Combined Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 3G service to a 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
ret-ps-inter-rat-rau-acc-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of retransmitted GPRS only Inter RAT RAU Accepts sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ret-ps-inter-rat-rau-acc-3g	Description: Total number of retransmitted GPRS only Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 2G service to a 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
ret-ps-inter-rat-rau-acc-2g	Description: Total number of retransmitted GPRS only Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 3G service to a 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
ret-comb-inter-rat-rau-acc-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of retransmitted Combined Inter RAT RAU Accepts sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ret-comb-inter-rat-rau-acc-3g	Description: Total number of retransmitted Combined Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 3G service to a 2G service. Availability: per RA, per SGSN service Type: Counter	Int32
ret-comb-inter-rat-rau-acc-2g	Description: Total number of retransmitted Combined Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 2G service to a 3G service. Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
ps-inter-service-rau-acc-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of GPRS only Inter Service RAU Accepts sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ps-inter-service-rau-acc-3g	Description: Total number of GPRS only Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
ps-inter-service-rau-acc-2g	Description: Total number of GPRS only Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
comb-inter-service-rau-acc-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of Combined Inter Service RAU Accepts sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
comb-inter-service-rau-acc-3g	Description: Total number of Combined Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
comb-inter-service-rau-acc-2g	Description: Total number of Combined Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
ret-ps-inter-service-rau-acc-total	Description: Total number of retransmitted GPRS only Inter Service RAU Accepts sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ret-ps-inter-service-rau-acc-3g	Description: Total number of retransmitted GPRS only Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
ret-ps-inter-service-rau-acc-2g	Description: Total number of retransmitted GPRS only Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
ret-comb-inter-service-rau-acc-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of retransmitted Combined Inter Service RAU Accepts sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32

Variables	Description	Data Type
ret-comb-inter-service-rau-acc-3g	Description: Total number of retransmitted Combined Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
ret-comb-inter-service-rau-acc-2g	Description: Total number of retransmitted Combined Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
ps-inter-rat-rau-rej-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of GPRS only Inter RAT RAU Rejects sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ps-inter-rat-rau-rej-3g	Description: Total number of GPRS only Inter RAT RAU Rejects sent against RAU Requests for subscribers moving from 2G service to a 3G service. Availability: per RA, per SGSN service	Int32
ps-inter-rat-rau-rej-2g	Description: Total number of GPRS only Inter RAT RAU Rejects sent against RAU Requests for subscribers moving from 3G service to a 2G service. Availability: per RA, per GPRS service	Int32
comb-inter-rat-rau-rej-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of Combined Inter RAT RAU Rejects sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service	Int32
comb-inter-rat-rau-rej-3g	Description: Total number of Combined Inter RAT RAU Rejects sent against RAU Requests for subscribers moving from 2G service to a 3G service. Availability: per RA, per SGSN service	Int32
comb-inter-rat-rau-rej-2g	Description: Total number of Combined Inter RAT RAU Rejects sent against RAU Requests for subscribers moving from 3G service to a 2G service. Availability: per RA, per GPRS service	Int32
ps-inter-rat-rau-fail-3g	Description: Total number of failures in GPRS-only inter-RAT RAU procedures initiated by subscribers moving from 2G services to 3G services. Triggers: Increments when a GPRS-only RAU procedure is dropped without a RAU Reject on an intra-SGSN inter-RAT RAU from 2G to 3G. Availability: per RA, per SGSN service Type: Counter	Int32
ps-inter-rat-rau-fail-2g	Description: Total number of failures in GPRS-only inter-RAT RAU procedures initiated by subscribers moving from 3G services to 2G services. Triggers: Increments when a GPRS-only RAU procedure is dropped without a RAU Reject on an intra-SGSN inter-RAT RAU from 3G to 2G. Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
combo-inter-rat-rau-fail-3g	Description: Total number of failures in combined inter-RAT RAU procedures initiated by subscribers moving from 2G services to a 3G service. Triggers: Increments when a combined RAU procedure is dropped without a RAU Reject on an intra-SGSN inter-RAT RAU from 2G to 3G. Availability: per RA, per SGSN service Type: Counter	Int32
combo-inter-rat-rau-fail-2g	Description: Total number of failures in combined inter-RAT RAU procedures initiated by subscribers moving from a 3G service to a 2G service. Triggers: Increments when a combined RAU procedure is dropped without a RAU Reject on an intra-SGSN inter-RAT RAU from 3G to 2G. Availability: per RA, per GPRS service Type: Counter	Int32
ps-inter-service-rau-rej-total	Description: Total number of GPRS only Inter Service RAU Rejects sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
ps-inter-service-rau-rej-3g	Description: Total number of GPRS only Inter Service RAU Rejects sent against RAU Requests for subscribers moving from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
ps-inter-service-rau-rej-2g	Description: Total number of GPRS only Inter Service RAU Rejects sent against RAU Requests for subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
comb-inter-service-rau-rej-total	NOTE: This statistic was deprecated for Release 11.0 and higher. Description: Total number of Combined Inter Service RAU Rejects sent in both 2G and 3G services. Availability: per RA, per GPRS/SGSN service Type: Counter	Int32
comb-inter-service-rau-rej-3g	Description: Total number of Combined Inter Service RAU Rejects sent against RAU Requests for subscribers moving from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
comb-inter-service-rau-rej-2g	Description: Total number of Combined Inter Service RAU Rejects sent against RAU Requests for subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
ps-inter-service-rau-fail-3g	Description: Total number of failures in GPRS-only inter-Service RAU procedures initiated by subscribers moving from one 3G service to another 3G service. Triggers: Increments when a GPRS-only RAU procedure is dropped without a RAU Reject on an intra-SGSN inter-service RAU from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
ps-inter-service-rau-fail-2g	Description: Total number of failures in GPRS-only inter-Service RAU procedures initiated by subscribers moving from one 2G service to another 2G service. Triggers: Increments when a GPRS-only RAU procedure is dropped without a RAU Reject on an intra-SGSN Inter-service RAU from one 2G service to another 2G service. Availability: per RA, per GPRS service Type: Counter	Int32
comb-inter-service-rau-fail-3g	Description: Total number of failures in combined inter-Service RAU procedures initiated by subscribers moving from one 3G service to another 3G service. Triggers: Increments when a combined RAU procedure is dropped without a RAU Reject on an intra-SGSN inter-Service RAU from one 3G service to another 3G service. Availability: per RA, per SGSN service Type: Counter	Int32
comb-inter-service-rau-fail-2g	Description: Total number of failures in combined inter-Service RAU procedures initiated by subscribers moving from one 2G service to another 2G service. Triggers: Increments when a combined RAU procedure is dropped without a RAU Reject on an intra-SGSN inter-Service RAU from one 2G service to another 2G service. Availability: per RA, per SGSN service Type: Counter	Int32
3G-isrv-ps-rej-imsi-unknown-hlr	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “IMSI unknown at HLR”. Triggers: Increments - on HLR sending a bad response to a SAI-Req or GLU-Req - on getting zero auth vectors for HLR for a SAI-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-imsi-unknown-hlr	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “IMSI unknown at HLR”. Triggers: Increments - on HLR sending a bad response to a SAI-Req or GLU-Req - on getting zero auth vectors for HLR for a SAI-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-illegal-ms	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Illegal M”. Triggers: Increments - on HLR sending a bad response to a SAI-Req or GLU-Req - on getting zero auth vectors for HLR for a SAI-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-isrv-ps-rej-illegal-ms	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Illegal MS”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-illegal-me	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Illegal ME”. Triggers: Increments - when SGSN is unable to retrieve IMEI/IMEISV from the MS - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-illegal-me	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Illegal ME”. Triggers: Increments - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-gprs-svc-not-allow	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: Increments - on getting a cl (subs-with) while an attach/RAU is in progress - on getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - for rejecting attaches due to subscriber control inactivity - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-gprs-svc-not-allow	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 2G service. Triggers: Increments - on getting a cl (subs-with) while an attach/RAU is in progress - on getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - for rejecting attaches due to subscriber control inactivity - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-nongprs-svc-not-allow	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 3G service. Triggers: Increments - on getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-isrv-ps-rej-nongprs-svc-not-allow	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 2G service. Triggers: Increments - on getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-msid-not-derived-by-nw	Description: Total number of GPRS only Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against inter-Service-RAU Requests in 3G service. Triggers: Increments - on getting periodic RAU with old RAI as a non-local RAI - when PTMSI-IE is missing in RAU - when old RAI has invalid location area values (0x0000 or 0xffff) for PTMSI-attaches/RAUs - when getting a RAU with old RAI in 2G and PTMSI is unknown - when getting PTMSI-SIG-MISMATCH for a SGSN Context Request sent with IMSI Validated - when getting a RAU Request while an attach with the same peer-SGSN-PTMSI is in progress - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-msid-not-derived-by-nw	Description: Total number of GPRS only Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against inter-Service-RAU Requests in 2G service. Triggers: Increments - when SGSN-Context-Resp arrives with any cause other than “accepted” - when GMM-Identity-Req with MS fails - when GTP-Identity-Req with MS fails - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-implicitly-detach	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: Increments - on RAU at 3G when subscriber was detached from 2G - when we get a different IMSI in SGSN Context Response for an SGSN Context Request sent with IMSI validated - when we get RAU while awaiting a Detach Accept - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-implicitly-detach	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Implicitly detached”. Triggers: Increments - when we get an RAU from an unknown MS - on T3350 expiry for the attach-accept - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-ps-rej-plmn-not-allowed	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-plmn-not-allowed	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-loc-area-not-allowed	Description: Total number of GPRS only Inter Service RAU rejects in 3G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-loc-area-not-allowed	Description: Total number of GPRS only Inter Service RAU rejects in 2G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-roam-not-allowed-larea	Description: Total number of GPRS only Inter Service RAU rejects in 3G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments - when rejecting as a shared SGSN due to no operator accepting the given IMSI - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-roam-not-allowed-larea	Description: Total number of GPRS only Inter Service RAU rejects in 2G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-gprs-svc-not-allowed-plmn	Description: Total number of GPRS only RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against inter-Service-RAU Requests in 3G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-isrv-ps-rej-gprs-svc-not-allowed-plmn	Description: Total number of GPRS only RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against inter-Service-RAU Requests in 2G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-no-cells-in-location-area	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “No cells in location area”. Triggers: Increments - on getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-no-cells-in-location-area	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “No cells in location area”. Triggers: Increments - on getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-msc-not-reachable	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “MSC not reachable”. Triggers: Increments - on sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: • the request is timed out • inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-msc-not-reachable	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “MSC not reachable”. Triggers: Increments - on sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: • the request is timed out • inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-ps-rej-network-failure	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Network Failure”. Triggers: Increments - when RNC is overloaded - when there are not enough credits at session manager - on getting cause “data missing from HLR” in SAI-Req/GLU-Req - when there are too many IUs for the same IMSI - on getting a RAU with a peer SGSN PTMSI when another Attach is ongoing with the same PTMSI - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-network-failure	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Network Failure”. Triggers: Increments - on getting cause “data missing from HLR” in SAI-Req/GLU-Req - on XID failure for RAU - unable to send an SGSN-Ctx-Req out for an RAU. - unable to send a Check-IMEI Request out - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-mac-failure	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-mac-failure	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-syn-failure	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-syn-failure	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-ps-rej-congestion	Description: Total number of GPRS Only Inter Service RAU Rejects in 3G service with cause “Network Congestion”. Triggers: Increments - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-congestion	Description: Total number of GPRS Only Inter Service RAU Rejects in 2G service with cause “Network Congestion”. Triggers: Increments - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-gsm-auth-unacceptable	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-gsm-auth-unacceptable	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-no-pdp-ctx-actv	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-no-pdp-ctx-actv	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-retry-from-new-cell	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-isrv-ps-rej-retry-from-new-cell	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-sem-wrong-msg	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Semantically wrong message”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-sem-wrong-msg	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Semantically wrong message”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-inval-mand-info	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Invalid Mandatory Info”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-inval-mand-info	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Invalid Mandatory Info”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-msg-type-non-exist	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Message type does not exist”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-isrv-ps-rej-msg-type-non-exist	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Message type does not exist”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-mtype-incompat-pstate	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Message type not compatible with protocol state”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-mtype-incompat-pstate	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Message type not compatible with protocol state”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-ie-non-existent	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Information element not existent”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-ie-non-existent	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Information element not existent”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-cond-ie-error	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “error in conditional informational element”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-isrv-ps-rej-cond- ie-error	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “error in conditional informational element”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-msg- not-compat-pstate	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “message not compatible with protocol state”. Triggers: Increments - when getting an Attach Request before getting Relocation-complete during SRNS - when getting periodic RAU in a direct transfer message - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-msg- not-compat-pstate	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “message not compatible with protocol state”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej-prot- error	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “protocol error”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej-prot- error	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “protocol error”. Triggers: Increments - when the PLMN ID in BSSGP message does not match the configured PLMN at GPRS service - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-ps-rej- unknown-error	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “unknown error”. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-ps-rej- unknown-error	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “unknown error”. Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-comb-rej-imsi-unknown-hlr	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “IMSI unknown at HLR”. Triggers: Increments - on HLR sending a bad response to a SAI-Req/GLU-Req - on getting zero auth vectors for HLR for a SAI-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-imsi-unknown-hlr	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “IMSI unknown at HLR”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-illegal-ms	Description: Total number of Combined Inter Service RAU rejects in 3G service with cause “Illegal MS”. Triggers: Increments - when unable to retrieve IMEI/IMEISV from MS - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-illegal-ms	Description: Total number of Combined Inter Service RAU rejects in 2G service with cause “Illegal MS”. Triggers: Increments - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-illegal-me	Description: Total number of Combined Inter Service RAU rejects in 3G service with cause “Illegal ME”. Triggers: Increments - when unable to retrieve IMEI/IMEISV from MS - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-illegal-me	Description: Total number of Combined Inter Service RAU rejects in 2G service with cause “Illegal ME”. Triggers: Increments - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-comb-rej-gprs-svc-not-allow	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: Increments - on getting a cl (subs-with) while an attach/RAU is in progress - on getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - for rejecting attaches due to subscriber control inactivity - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-gprs-svc-not-allow	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 2G service. Triggers: Increments - on getting a cl (subs-with) while an attach/RAU is in progress - on getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - for rejecting attaches due to subscriber control inactivity - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-nongprs-svc-not-allow	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 3G service. Triggers: Increments - on getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-nongprs-svc-not-allow	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 2G service. Triggers: Increments - on getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-msid-not-derived-by-nw	Description: Total number of Combined Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against inter-Service-RAU Requests in 3G service. Triggers: Increments - on getting periodic RAU with old RAI as a non-local RAI - when PTMSI-IE is missing in RAU - when old RAI has invalid location area values (0x0000 or 0xffff) for PTMSI-attaches/RAUs - when getting a RAU with old RAI in 2G and PTMSI is unknown - when getting PTMSI-SIG-MISMATCH for a SGSN Context Request sent with IMSI Validated - when getting a RAU Request while an attach with the same peer-SGSN-PTMSI is in progress - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-isrv-comb-rej-msid-not-derived-by-nw	Description: Total number of Combined Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against inter-Service-RAU Requests in 2G service. Triggers: Increments - when SGSN-Context-Resp arrives with any cause other than “accepted” - when GMM-Identity-Req with MS fails - when GTP-Identity-Req with MS fails - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-implicitly-detach	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: Increments - if RAU at 3G when subscriber was detached from 2G - when we get a different IMSI in SGSN Context Response for an SGSN Context Request sent with IMSI validated - when we get RAU while awaiting a Detach Accept - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-implicitly-detach	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Implicitly detached”. Triggers: Increments - when we get an RAU from an unknown MS - on T3350 expiry for the attach-accept - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-plmn-not-allowed	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-plmn-not-allowed	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-loc-area-not-allowed	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-isrv-comb-rej-loc-area-not-allowed	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-roam-not-allowed-larea	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments - when rejecting as a shared SGSN due to no operator accepting the given IMSI - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-roam-not-allowed-larea	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-gprs-svc-not-allowed-plmn	Description: Total number of Combined RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against inter-Service-RAU Requests in 3G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-gprs-svc-not-allowed-plmn	Description: Total number of Combined RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against inter-Service-RAU Requests in 2G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-no-cells-in-location-area	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “No cells in location area”. Triggers: Increments - on getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-no-cells-in-location-area	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “No cells in location area”. Triggers: Increments - on getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-comb-rej-msc-not-reachable	Description: Total number of Combined Inter Service RAU rejects in 3G service with cause “MSC not reachable”. Triggers: Increments - on sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: • the request is timed out • inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-msc-not-reachable	Description: Total number of Combined Inter Service RAU rejects in 2G service with cause “MSC not reachable”. Triggers: Increments - on sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: • the request is timed out • inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-network-failure	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Network Failure”. Triggers: Increments - when RNC is overloaded - when there are not enough credits at session manager - on getting cause “data missing from HLR” in SAI-Req/GLU-Req - when there are too many IUs for the same IMSI - on getting a RAU with a peer SGSN PTMSI when another Attach is ongoing with the same PTMSI - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-network-failure	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Network Failure”. Triggers: Increments - on getting cause “data missing from HLR” in SAI-Req/GLU-Req - on XID failure for RAU - unable to send an SGSN-Ctx-Req out for an RAU - unable to send a Check-IMEI Request out - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-comb-rej-mac-failure	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-mac-failure	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-syn-failure	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-syn-failure	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-congestion	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Network Congestion”. Triggers: Increments - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-congestion	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Network Congestion”. Triggers: Increments - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-gsm-auth-unacceptable	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-isrv-comb-rej-gsm-auth-unacceptable	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-no-pdp-ctx-actv	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-no-pdp-ctx-actv	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-retry-from-new-cell	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-retry-from-new-cell	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-sem-wrong-msg	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Semantically wrong message”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-sem-wrong-msg	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Semantically wrong message”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-comb-rej-inval-mand-info	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause "Invalid Mandatory Info". Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-inval-mand-info	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause "Invalid Mandatory Info". Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-msg-type-non-exist	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause "Message type does not exist". Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-msg-type-non-exist	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause "Message type does not exist". Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-mtype-incompat-pstate	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause "Message type not compatible with protocol state". Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-mtype-incompat-pstate	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause "Message type not compatible with protocol state". Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-comb-rej- ie-non-existent	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Information element not existent”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej- ie-non-existent	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Information element not existent”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej- cond-ie-error	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “error in conditional informational element”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej- cond-ie-error	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “error in conditional informational element”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej- msg-not-compat- pstate	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “message not compatible with protocol state”. Triggers: Increments - when getting an Attach Request before getting Relocation-complete during SRNS - when getting periodic RAU in a direct transfer message - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej- msg-not-compat- pstate	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “message not compatible with protocol state”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-isrv-comb-rej-prot-error	Description: Total number of Combined Inter Service RAU rejects in 3G service with cause “protocol error”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-prot-error	Description: Total number of Combined Inter Service RAU rejects in 2G service with cause “protocol error”. Triggers: Increments - when the PLMN ID in BSSGP message does not match the configured PLMN at GPRS service - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-isrv-comb-rej-unknown-error	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “unknown error”. Availability: per RA, per SGSN service Type: Counter	Int32
2G-isrv-comb-rej-unknown-error	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “unknown error”. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-imsi-unknown-hlr	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “IMSI unknown at HLR”. Triggers: Increments - on HLR sending a bad response to SAI-Req/GLU-Req - on getting zero auth vectors for HLR for a SAI-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-imsi-unknown-hlr	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “IMSI unknown at HLR”. Triggers: Increments - on HLR sending a bad response to SAI-Req/GLU-Req - on getting zero auth vectors for HLR for a SAI-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-illegal-ms	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Illegal MS”. Triggers: Increments - on HLR sending a bad response to SAI-Req/GLU-Req - on getting zero auth vectors for HLR for a SAI-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-irat-ps-rej-illegal-ms	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Illegal MS”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-illegal-me	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Illegal ME”. Triggers: Increments - when unable to retrieve IMEI/IMEISV from MS - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-illegal-me	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Illegal ME”. Triggers: Increments - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-gprs-svc-not-allow	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: Increments - on getting a cl (subs-with) while an attach/RAU is in progress - on getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - for rejecting attaches due to subscriber control inactivity - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-gprs-svc-not-allow	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 2G service. Triggers: Increments - on getting a cl (subs-with) while an attach/RAU is in progress - on getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - for rejecting attaches due to subscriber control inactivity - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-nongprs-svc-not-allow	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 3G service. Triggers: Increments - on getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-irat-ps-rej-nongprs-svc-not-allow	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 2G service. Triggers: Increments - on getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-msid-not-derived-by-nw	Description: Total number of GPRS only inter-service routing area update request rejects sent with cause “MSID not derived by network” against inter-Service-RAU requests in 3G service. Triggers: Increments - on getting periodic RAU with old RAI as a non-local RAI - when PTMSI-IE is missing in RAU - when old RAI has invalid location area values (0x0000 or 0xffff) for PTMSI-attaches/RAUs - when getting a RAU with old RAI in 2G and PTMSI is unknown - when getting PTMSI-SIG-MISMATCH for a SGSN Context Request sent with IMSI Validated - when getting a RAU Request while an attach with the same peer-SGSN-PTMSI is in progress - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-msid-not-derived-by-nw	Description: Total number of GPRS only inter-service routing area update request rejects sent with cause “MSID not derived by network” against inter-Service-RAU requests in 3G service. Triggers: Increments - when SGSN-Context-Resp arrives with any cause other than “accepted” - when GMM-Identity-Req with MS fails - when GTP-Identity-Req with MS fails - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-implicitly-detach	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: Increments - for RAU at 3G when subscriber was detached from 2G - when we get a different IMSI in SGSN Context Response for an SGSN Context Request sent with IMSI validated - when we get RAU while awaiting a Detach Accept - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-implicitly-detach	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: Increments - when we get an RAU from an unknown MS - when T3350 expiry for the Attach-accept - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-ps-rej-plmn-not-allowed	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-plmn-not-allowed	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-loc-area-not-allowed	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-loc-area-not-allowed	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-roam-not-allowed-larea	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments - when rejecting as a shared SGSN due to no operator accepting the given IMSI - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-roam-not-allowed-larea	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments - when rejecting as a shared SGSN due to no operator accepting the given IMSI - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-gprs-svc-not-allowed-plmn	Description: Total number of GPRS only RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against inter-Service-RAU Requests in 3G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-irat-ps-rej-gprs-svc-not-allowed-plmn	Description: Total number of GPRS only RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against inter-Service-RAU Requests in 2G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-no-cells-in-location-area	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “No cells in location area”. Triggers: Increments - on getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-no-cells-in-location-area	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “No cells in location area”. Triggers: Increments - on getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-msc-not-reachable	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “MSC not reachable”. Triggers: Increments - on sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-msc-not-reachable	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “MSC not reachable”. Triggers: Increments - on sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-ps-rej-network-failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Network Failure”. Triggers: Increments - if RNC is overloaded - when not enough credits available at session manager - on getting cause “data missing from HLR” in SAI-Req/GLU-Req - when there are too many IUs for the same IMSI - on getting a RAU with a peer SGSN PTMSI when another Attach is ongoing with the same PTMSI - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-network-failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Network Failure”. Triggers: Increments - on getting cause “data missing from HLR” in SAI-Req/GLU-Req - On XID failure for RAU - when unable to send an SGSN-Ctx-Req out for an RAU. - when unable to send a Check-IMEI Request out - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-mac-failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-mac-failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-syn-failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-syn-failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-ps-rej-congestion	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Network Congestion”. Triggers: Increments - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-congestion	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Network Congestion”. Triggers: Increments - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-gsm-auth-unacceptable	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-gsm-auth-unacceptable	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-no-pdp-ctx-actv	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-no-pdp-ctx-actv	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-retry-from-new-cell	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-irat-ps-rej-retry-from-new-cell	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-sem-wrong-msg	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Semantically wrong message”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-sem-wrong-msg	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Semantically wrong message”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-inval-mand-info	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Invalid Mandatory Info”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-inval-mand-info	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Invalid Mandatory Info”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-msg-type-non-exist	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Message type does not exist”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-irat-ps-rej-msg-type-non-exist	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Message type does not exist”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-mtype-incompat-pstate	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Message type not compatible with protocol state”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-mtype-incompat-pstate	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Message type not compatible with protocol state”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-ie-non-existent	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Information element not existent”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-ie-non-existent	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Information element not existent”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-cond-ie-error	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “error in conditional informational element”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-irat-ps-rej-condie-error	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “error in conditional information element”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-msg-not-compat-pstate	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “message not compatible with protocol state”. Triggers: Increments - when getting an Attach Request before getting Relocation-complete during SRNS - when getting periodic RAU in a direct transfer message - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-msg-not-compat-pstate	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “message not compatible with protocol state”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-prot-error	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “protocol error”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-prot-error	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “protocol error”. Triggers: Increments - when the PLMN ID in BSSGP message does not match the configured PLMN at GPRS service - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-ps-rej-unknown-error	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “unknown error”. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-ps-rej-unknown-error	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “unknown error”. Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-comb-rej-imsi-unknown-hlr	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “IMSI unknown at HLR”. Triggers: Increments - on HLR sending a bad response to a SAI-Req/GLU-Req - on getting zero auth vectors for HLR for a SAI-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-imsi-unknown-hlr	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “IMSI unknown at HLR”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-illegal-ms	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Illegal MS”. Triggers: Increments - when unable to retrieve IMEI/IMEISV from MS - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-illegal-ms	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Illegal MS”. Triggers: Increments - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-illegal-me	Description: Total number of Combined Inter RAT RAU rejects in 3G service with cause “Illegal ME”. Triggers: Increments - when unable to retrieve IMEI/IMEISV from MS - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-illegal-me	Description: Total number of Combined Inter RAT RAU rejects in 3G service with cause “Illegal ME”. Triggers: Increments - on IMEI verification failure with EIR - on getting unknown equipment failure from EIR/HLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-comb-rej-gprs-svc-not-allow	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: Increments - on getting a cl (subs-with) while an attach/RAU is in progress - on getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - for rejecting attaches due to subscriber control inactivity - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-gprs-svc-not-allow	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: Increments - on getting a cl (subs-with) while an attach/RAU is in progress - on getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - for rejecting attaches due to subscriber control inactivity - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-nongprs-svc-not-allow	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 3G service. Triggers: Increments - on getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-nongprs-svc-not-allow	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 2G service. Triggers: Increments - on getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-msid-not-derived-by-nw	Description: Total number of Combined Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against inter-Service-RAU Requests in 3G service. Triggers: Increments - on getting periodic RAU with old RAI as a non-local RAI - when PTMSI-IE is missing in RAU - when old RAI has invalid location area values (0x0000 or 0xffff) for PTMSI-attaches/RAUs - when getting a RAU with old RAI in 2G and PTMSI is unknown - when getting PTMSI-SIG-MISMATCH for a SGSN Context Request sent with IMSI Validated - when getting a RAU Request while an attach with the same peer-SGSN-PTMSI is in progress - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-irat-comb-rej-msid-not-derived-by-nw	Description: Total number of Combined Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against inter-Service-RAU Requests in 2G service. Triggers: Increments - when SGSN-Context-Resp arrives with any cause other than “accepted” - when GMM-Identity-Req with MS fails - when GTP-Identity-Req with MS fails - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-implicitly-detach	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: Increments - if RAU at 3G when subscriber was detached from 2G - when we get a different IMSI in SGSN Context Response for an SGSN Context Request sent with IMSI validated - when we get RAU while awaiting a Detach Accept - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-implicitly-detach	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Implicitly detached”. Triggers: Increments - when we get an RAU from an unknown MS - on T3350 expiry for the attach-accept - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-plmn-not-allowed	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-plmn-not-allowed	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-loc-area-not-allowed	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-irat-comb-rej-loc-area-not-allowed	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-roam-not-allowed-larea	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments - when rejecting as a shared SGSN due to no operator accepting the given IMSI - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-roam-not-allowed-larea	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-gprs-svc-not-allowed-plmn	Description: Total number of Combined RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against inter-Service-RAU Requests in 3G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-gprs-svc-not-allowed-plmn	Description: Total number of Combined RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against inter-Service-RAU Requests in 2G service. Triggers: Increments - on getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-no-cells-in-location-area	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “No cells in location area”. Triggers: Increments - on getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-no-cells-in-location-area	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “No cells in location area”. Triggers: Increments - on getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-comb-rej-msc-not-reachable	Description: Total number of Combined Inter RAT RAU rejects in 3G service with cause “MSC not reachable”. Triggers: Increments - on sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: • the request is timed out • inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-msc-not-reachable	Description: Total number of Combined Inter RAT RAU rejects in 2G service with cause “MSC not reachable”. Triggers: Increments - on sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: • the request is timed out • inability to send to VLR - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-network-failure	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Network Failure”. Triggers: Increments - if RNC is overloaded - when there are not enough credits at session manager - on getting cause “data missing from HLR” in SAI-Req/GLU-Req - when there are too many Ius for the same IMSI - on getting a RAU with a peer SGSN PTMSI when another Attach is ongoing with the same PTMSI - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-network-failure	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Network Failure”. Triggers: Increments - on getting cause “data missing from HLR” in SAI-Req/GLU-Req - on XID failure for RAU - unable to send an SGSN-Ctx-Req out for an RAU - unable to send a Check-IMEI Request out - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-comb-rej-mac-failure	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-mac-failure	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-syn-failure	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-syn-failure	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-congestion	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Network Congestion”. Triggers: Increments - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-congestion	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Network Congestion”. Triggers: Increments - on congestion, if configured for attach-throttling - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-gsm-auth-unacceptable	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32

Variables	Description	Data Type
2G-irat-comb-rej-gsm-auth-unacceptable	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-no-pdp-ctx-actv	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-no-pdp-ctx-actv	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-retry-from-new-cell	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-retry-from-new-cell	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-sem-wrong-msg	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Semantically wrong message”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-sem-wrong-msg	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Semantically wrong message”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-comb-rej-inval-mand-info	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Invalid Mandatory Info”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-inval-mand-info	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Invalid Mandatory Info”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-msg-type-non-exist	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Message type does not exist”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-msg-type-non-exist	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Message type does not exist”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-mtype-incompat-pstate	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Message type not compatible with protocol state”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-mtype-incompat-pstate	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Message type not compatible with protocol state”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-comb-rej-ie-non-existent	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Information element not existent”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-ie-non-existent	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Information element not existent”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-cond-ie-error	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “error in conditional informational element”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-cond-ie-error	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “error in conditional informational element”. Triggers: Increments - on decode failure of messages - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-msg-not-compat-pstate	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “message not compatible with protocol state”. Triggers: Increments - when getting an Attach Request before getting Relocation-complete during SRNS - when getting periodic RAU in a direct transfer message - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-msg-not-compat-pstate	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “message not compatible with protocol state”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-irat-comb-rej-prot-error	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “protocol error”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-prot-error	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “protocol error”. Triggers: Increments - when the PLMN ID in BSSGP message does not match the configured PLMN at GPRS service - when operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service Type: Counter	Int32
3G-irat-comb-rej-unknown-error	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “unknown error”. Availability: per RA, per SGSN service Type: Counter	Int32
2G-irat-comb-rej-unknown-error	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “unknown error”. Availability: per RA, per GPRS service Type: Counter	Int32
redir-attach-rej-gprs-pna	Description: Total number of GPRS Attach Rejects sent with a redirection indication cause of “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-attach-rej-comb-pna	Description: Total number of combined Attach Rejects sent with a redirection indication using any cause other than “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-intra-sgsn-rej-pna	Description: Total number of intra-SGSN GPRS RAU Rejects sent with a redirection indication cause of “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-rau-comb-intra-sgsn-rej-pna	Description: Total number of intra-SGSN combined-RAU Rejects sent with a redirection indication cause of “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-sgsn-rej-pna	Description: Total number of inter-SGSN GPRS RAU Rejects sent with a redirection indication cause of “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-sgsn-rej-pna	Description: Total number of inter-SGSN combined-RAU Rejects sent with a redirection indication cause of “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-rat-pna	Description: Total number of inter-RAT GPRS-RAU Rejects sent with a redirection indication cause of “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-rat-pna	Description: Total number of inter-RAT combined-RAU Rejects sent with a redirection indication cause of “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-serv-pna	Description: Total number of inter-service GPRS-RAU Rejects sent with a redirection indication cause of “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-rau-comb-inter-serv-pna	Description: Total number of inter-service combined-RAU Rejects sent with a redirection indication cause of “PLMN Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-attach-rej-gprs-lana	Description: Total number of GPRS Attach Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-attach-rej-comb-lana	Description: Total number of combined Attach Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-periodic-rau-lana	Description: Total number of intra-SGSN GPRS-RAU Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-intra-sgsn-rej-lana	Description: Total number of intra-SGSN periodic-RAU Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-intra-sgsn-rej-lana	Description: Total number of intra-SGSN combined-RAU Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-rau-gprs-inter-sgsn-rej-lana	Description: Total number of inter-SGSN GPRS-RAU Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-sgsn-rej-lana	Description: Total number of inter-SGSN combined-RAU Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-rat-lana	Description: Total number of inter-RAT GPRS-RAU Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-rat-lana	Description: Total number of inter-RAT combined-RAU Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-serv-lana	Description: Total number of inter-service GPRS-RAU Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-serv-lana	Description: Total number of inter-service combined-RAU Rejects sent with a redirection indication cause of “Location Area Not Allowed”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-attach-rej-gprs-rna	Description: Total number of GPRS Attach Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-attach-rej-comb-rna	Description: Total number of combined Attach Rejects sent with a redirection indication using any cause other than “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-periodic-rau-rna	Description: Total number of intra-SGSN periodic-RAU Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-intra-sgsn-rej-rna	Description: Total number of intra-SGSN GPRS-RAU Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-intra-sgsn-rej-rna	Description: Total number of intra-SGN combined-RAU Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-sgsn-rej-rna	Description: Total number of inter-SGSN GPRS-RAU Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-rau-comb-inter-sgsn-rej-rna	Description: Total number of inter-SGSN combined-RAU Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-rat-rna	Description: Total number of inter-RAT GPRS-RAU Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-rat-rna	Description: Total number of inter-RAT combined-RAU Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-serv-rna	Description: Total number of inter-service GPRS-RAU Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-serv-rna	Description: Total number of inter-service combined-RAU Rejects sent with a redirection indication cause of “Roaming Not Allowed in Location Area”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-attach-rej-gprs-ngs	Description: Total number of GPRS Attach Rejects sent with a redirection indication cause of “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-attach-rej-comb-ngs	Description: Total number of combined Attach Rejects sent with a redirection indication using any cause other than “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-intra-sgsn-rej-ngs	Description: Total number of intra-SGSN GPRS-RAU Rejects sent with a redirection indication cause of “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-intra-sgsn-rej-ngs	Description: Total number of intra-SGSN combined-RAU Rejects sent with a redirection indication cause of “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-sgsn-rej-ngs	Description: Total number of inter-SGSN GPRS-RAU Rejects sent with a redirection indication cause of “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-sgsn-rej-ngs	Description: Total number of inter-SGSN combined-RAU Rejects sent with a redirection indication cause of “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-rat-ngs	Description: Total number of inter-RAT GPRS-RAU Rejects sent with a redirection indication cause of “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-rau-comb-inter-rat-ngs	Description: Total number of inter-RAT combined-RAU Rejects sent with a redirection indication cause of “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-serv-ngs	Description: Total number of inter-service GPRS-RAU Rejects sent with a redirection indication cause of “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-serv-ngs	Description: Total number of inter-service combined-RAU Rejects sent with a redirection indication cause of “No GPRS Service in PLMN”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-attach-rej-gprs-cpcr	Description: Total number of GPRS Attach Rejects sent with a redirection indication cause of “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32
redir-attach-rej-comb-cpcr	Description: Total number of combined Attach Rejects sent with a redirection indication cause that is any cause other than “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-intra-sgsn-rej-cpcr	Description: Total number of intra-SGSN periodic-RAU Rejects sent with a redirection indication cause of “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-intra-sgsn-rej-cpcr	Description: Total number of intra-SGSN combined-RAU Rejects sent with a redirection indication cause of “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-rau-gprs-inter-sgsn-rej-cpcr	Description: Total number of inter-SGSN GPRS-RAU Rejects sent with a redirection indication cause of “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-sgsn-rej-cpcr	Description: Total number of inter-SGSN combined-RAU Rejects sent with a redirection indication cause of “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-rat-cpcr	Description: Total number of inter-RAT GPRS-RAU Rejects sent with a redirection indication cause of “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-rat-cpcr	Description: Total number of inter-RAT combined-RAU Rejects sent with a redirection indication cause of “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-serv-cpcr	Description: Total number of inter-service GPRS-RAU Rejects sent with a redirection indication cause of “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-serv-cpcr	Description: Total number of GPRS Attach Rejects sent with a redirection indication cause of “CS-PS Co-ordination Required”. Triggers: Increments when network sharing is enabled and CS-PS co-ordination is enabled as CS-PS co-ordinations conditions apply according to 3GPP TS 23.251. Availability: per SGSN, per RA Type: Counter	Int32
redir-attach-rej-gprs-ur	Description: Total number of GPRS Attach Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-attach-rej-comb-ur	Description: Total number of combined Attach Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-intra-sgsn-rej-ur	Description: Total number of intra-SGSN GPRS-RAU Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-intra-sgsn-rej-ur	Description: Total number of intra-SGSN combined-RAU Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-sgsn-rej-ur	Description: Total number of inter-SGSN GPRS-RAU Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-sgsn-rej-ur	Description: Total number of inter-SGSN combined-RAU Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-gprs-inter-rat-ur	Description: Total number of inter-RAT GPRS-RAU Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-rat-ur	Description: Total number of inter-RAT combined-RAU Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32

Variables	Description	Data Type
redir-rau-gprs-inter-serv-ur	Description: Total number of inter-service GPRS-RAU Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
redir-rau-comb-inter-serv-ur	Description: Total number of inter-service combined-RAU Rejects sent with a redirection indication cause of “xxx”, which has been configured as the reject cause for network sharing failure cause. Triggers: Increments when network sharing is enabled and the SGSN is not configured to accept this subscriber under any of its PLMN. Availability: per SGSN, per RA Type: Counter	Int32
3G-ms-init-detach	Description: Total number of MS initiated Detach Requests of type 'GPRS Detach' received for 3G service. Triggers: Increments when the MS initiates a Detach Request. Availability: per SGSN service, per RA Type: Counter	Int32
2G-ms-init-detach	Description: Total number of MS initiated Detach Requests of type 'GPRS Detach' received for 2G service. Triggers: Increments when the MS initiates a Detach Request. Availability: per GPRS service Type: Counter	Int32
3G-ms-init-imsi-detach	Description: Total number of MS initiated Detach Requests of type 'Imsi Detach' received for 3G service. Triggers: Increments when the MS initiates a Detach Request. Availability: per SGSN service, per RA Type: Counter	Int32
2G-ms-init-imsi-detach	Description: Total number of MS initiated Detach Requests of type 'Imsi Detach' received for 2G service. Triggers: Increments when the MS initiates a Detach Request. Availability: per GPRS service Type: Counter	Int32
3G-ms-init-comb-detach	Description: Total number of MS initiated GPRS and IMSI (PS and CS) Detach Requests of type 'Combined Gprs/Imsi Detach' received for 3G service. Triggers: Increments when the MS initiates a Detach Request. Availability: per SGSN service, per RA Type: Counter	Int32
2G-ms-init-comb-detach	Description: Total number of MS initiated GPRS and IMSI (PS and CS) Detach Requests of type 'Combined Gprs/Imsi Detach' received for 2G service. Triggers: Increments when the MS initiates a Detach Request. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-nw-init-detach	Description: Total number of network initiated Detach Request procedures sent for 3G service. Triggers: 1) When a subscriber cleared by Administrator/operator. 2) When "Cancel Location" received from HLR. 3) When stand-alone "Delete Subscriber Data" is received with "All GPRS Subscription withdrawn". 4) When subscriber-control-inactivity timer expires and action is to detach immediately. Availability: per SGSN service, per RA Type: Counter	Int32
2G-nw-init-detach	Description: Total number of network initiated Detach Request procedures received for 2G service. Triggers: 1) When a subscriber cleared by Administrator/operator. 2) When "Cancel Location" received from HLR. 3) When stand-alone "Delete Subscriber Data" is received with "All GPRS Subscription withdrawn". 4) When subscriber-control-inactivity timer expires and action is to detach immediately. Availability: per GPRS service, per RA Type: Counter	Int32
3G-ms-init-detach-accept	Description: Total number of 3G service MS-initiated Detach Accept messages received by the SGSN and sent by the mobile station (MS) in response to network-initiated Detach Request messages. Triggers: Increments when a Detach Accept is received from an MS. Availability: per SGSN service, per RA Type: Counter	Int32
2G-ms-init-detach-accept	Description: Total number of 2G service MS-initiated Detach Accept messages received by the SGSN and sent by the mobile station (MS) in response to network-initiated Detach Request messages. Triggers: Increments when a Detach Accept is received from an MS. Availability: per GPRS service Type: Counter	Int32
3G-nw-init-detach-accept	Description: Total number of Network initiated Detach Accept messages in response to requests of type 'Gprs Detach' in 3G service. Triggers: Increments when the network accepts a detach initiated by the MS. Availability: per SGSN service, per RA Type: Counter	Int32
3G-nw-init-imsi-detach-accept	Description: Total number of Network initiated IMSI (CS) Detach Accept messages in response to requests of type 'Imsi Detach' in 3G service. Triggers: Increments when the network accepts a detach initiated by the MS. Availability: per SGSN service, per RA Type: Counter	Int32
3G-nw-init-comb-detach-accept	Description: Total number of Network initiated combined (GPRS and IMSI) Detach Accept messages in response to requests of type 'Combined Gprs/Imsi Detach' in 3G service. Triggers: Increments when the network accepts a detach initiated by the MS. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-nw-init-detach-accept	Description: Total number of Network initiated Detach Accept messages in response to requests of type 'Gprs Detach' in 2G service. Triggers: Increments when the network accepts a detach initiated by the MS. Availability: per GPRS service Type: Counter	Int32
2G-nw-init-imsi-detach-accept	Description: Total number of Network initiated IMSI (CS) Detach Accept messages in response to requests of type 'Imsi Detach' in 2G service. Triggers: Increments when the network accepts a detach initiated by the MS. Availability: per GPRS service Type: Counter	Int32
2G-nw-init-comb-detach-accept	Description: Total number of Network initiated combined (GPRS and IMSI) Detach Accept messages in response to requests of type 'Combined Gprs/Imsi Detach' in 2G service. Triggers: Increments when the network accepts a detach initiated by the MS. Availability: per GPRS service Type: Counter	Int32
3G-signalling-service-request	Description: Total number of Service Request messages received for type "Signalling" in 3G service. Triggers: Increments when the MS initiates a Serving Request message. Availability: per SGSN service, per RA Type: Counter	Int32
2G-signalling-service-request	This statistic has been deprecated.	Int32
3G-data-service-request	Description: Total number of Service Request messages received for type "Data" in 3G service. Triggers: Increments when the MS initiates a Serving Request message. Availability: per SGSN service, per RA Type: Counter	Int32
2G-data-service-request	This statistic has been deprecated.	Int32
3G-service-response	Description: Total number of Service Accept messages sent by the network in 3G service. Triggers: Increments when the SGSN receives and accepts a Serving Request message in connected state. Availability: per SGSN service, per RA Type: Counter	Int32
2G-service-response	This statistic has been deprecated.	Int32
3G-service-reject	Description: Total number of Service Reject messages sent by the network in 3G service. Triggers: A derived counter. See individual counters for trigger points. Availability: per SGSN service, per RA Type: Counter	Int32
2G-service-reject	This statistic has been deprecated.	Int32

Variables	Description	Data Type
3G-service-rej-netwk-fail	Description: Total number of Service Request messages rejected for 3G service due to network failure. Triggers: Increments - when the SGSN initiates SAI towards HLR but the SGSN does not receive an SAI response - when there are too many Ius to the same MM context - if RNC is overloaded Availability: per SGSN service, per RA Type: Counter	Int32
2G-service-rej-netwk-fail	This statistic has been deprecated.	Int32
3G-service-rej-imsi-unknown-at-hlr	Description: Total number of Service Request messages rejected for 3G service due to unknown IMSI in HLR. Triggers: Increments when we initiate SAI towards HLR but we get an 'imsi not known' from HLR. Availability: per SGSN service, per RA Type: Counter	Int32
2G-service-rej-imsi-unknown-at-hlr	This statistic has been deprecated.	Int32
3G-service-rej-msid-not-derived-by-nwtk	Description: Total number of Service Request messages rejected for 3G service as MSID can not derived by network from message. Triggers: Increments when we get an unknown PTMSI service request from an MS. Availability: per SGSN service, per RA Type: Counter	Int32
2G-service-rej-msid-not-derived-by-nwtk	This statistic has been deprecated.	Int32
3G-service-rej-implicit-detach	Description: Total number of Service Request messages rejected for 3G service due to implicitly detach. Triggers: Increments when we get a service request from an MS that is already detached. Availability: per SGSN service, per RA Type: Counter	Int32
2G-service-rej-implicit-detach	This statistic has been deprecated.	Int32
3G-service-rej-illegal-ms	Description: Total number of Service Request messages rejected for 3G service due to illegal mobile subscriber. Triggers: Increments when authentication fails on a service request. Availability: per SGSN service, per RA Type: Counter	Int32
2G-service-rej-illegal-ms	This statistic has been deprecated.	Int32
3G-service-rej-msg-not-compat-prot-state	Description: Total number of Service Request messages rejected for 3G service as message is not compatible with protocol state. Triggers: Increments when we get a service request for ongoing authentication or attach. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-service-rej-msg-not-compat-prot-state	This statistic has been deprecated.	Int32
3G-service-rej-no-pdp-ctx-actv	Description: Total number of Service Request messages rejected for 3G service as no PDP context is activated. Triggers: Increments when we get a service request of type 'data' and we have no PDP contexts activated. Availability: per SGSN service, per RA Type: Counter	Int32
2G-service-rej-no-pdp-ctx-actv	This statistic has been deprecated.	Int32
3G-service-rej-sem-wrong-msg	Description: Total number of Service Request messages rejected for 3G service as request message is semantically wrong. Triggers: Increments when a decode failure happens on a service request. Availability: per SGSN service, per RA Type: Counter	Int32
3G-service-rej-unknown-cause	Description: Total number of 3G Service Request messages rejected for unknown causes. Any number other than zero (0) indicates a software problem. This counter is new in release 9.0. Triggers: Increments when a 3G Service Request is rejected. Availability: per SGSN service, per RA Type: Counter	Int32
2G-service-rej-sem-wrong-msg	This statistic has been obsoleted in release 9.0. Description: Total number of Service Request messages rejected for 2G service as request message is semantically wrong. Triggers: Increments when a decode failure happens on a service request. Availability: per GPRS service, per RA Type: Counter	Int32
3G-paging-request	Description: Total number of 3G service Paging Request messages originated by SGSN and sent to the Radio Network Controller (RNC) to contact mobile stations (MS). Triggers: 1) Subscriber is in standby state and SGSN has some downlink signalling activity to do for network initiated detach procedure or downlink SM-messages (like modify-PDP-Request) to be sent. 2) Downlink data is to be sent to a standby subscriber Availability: per SGSN service Type: Counter	Int32
2G-paging-request	Description: Total number of 2G service Paging Request messages originated by SGSN and sent to the Radio Network Controller (RNC) to contact mobile stations (MS). Triggers: 1) Subscriber is in standby state and SGSN has some downlink signalling activity to do for network initiated detach procedure or downlink SM-messages (like modify-PDP-Request) to be sent. 2) Downlink data is to be sent to a standby subscriber. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-ret-paging-request	Total paging request messages retransmitted in packet switching (PS) domain for 3G service.	Int32
2G-ret-paging-request	Total paging request messages retransmitted in packet switching (PS) domain for 2G service.	Int32
3G-paging-success	Description: Total number of successful paging responses in 3G service. Triggers: Any successful lu passing security started after Paging is started. Availability: per SGSN service, per RA Type: Counter	Int32
2G-paging-success	Description: Total number of successful paging responses in 2G service. Triggers: Any LLC uplink frame received after a Page-Request is sent to MS. Availability: per GPRS service Type: Counter	Int32
3G-cs-page-request	Total paging request messages in circuit switching (CS) domain for 3G service.	Int32
2G-cs-page-request	Total paging request messages in circuit switching (CS) domain for 2G service.	Int32
3G-cs-page-response	NOTE: This statistic was deprecated for Release 11.0 and higher. Total paging request response messages sent in circuit switching (CS) domain for 3G service.	Int32
2G-cs-page-response	NOTE: This statistic was deprecated for Release 11.0 and higher. Total paging request response messages sent in circuit switching (CS) domain for 2G service.	Int32
3G-gmm-status-sent	Total GPRS mobility management procedure status messages sent for 3G service.	Int32
2G-gmm-status-sent	Total GPRS mobility management procedure status messages sent for 2G service.	Int32
3G-gmm-status-rcvd	Total GPRS mobility management procedure status messages received for 3G service.	Int32
2G-gmm-status-rcvd	Total GPRS mobility management procedure status messages received for 2G service.	Int32
3G-gmm-info-sent	Total messages sent with GPRS mobility management information for 3G service.	Int32
2G-gmm-info-sent	Total messages sent with GPRS mobility management information for 2G service.	Int32
3G-auth-cipher-request	Description: Total authentication and ciphering request messages for 3G service. Triggers: Whenever authentication procedure is initiated. Availability: per SGSN service, per RA Type: Counter	Int32
2G-auth-cipher-request	Description: Total authentication and ciphering request messages for 2G service. Triggers: Whenever authentication procedure is initiated. Availability: per GPRS service Type: Counter	Int32
3G-ret-auth-cipher-request	Description: Indicates the total number of authorization and cipher requests that were retransmitted in 3G. Triggers: On expiry of T3360 and a retransmission of auth and cipher request. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-ret-auth-cipher-request	Description: Indicates the total number of authorization and cipher requests that were retransmitted in 2G. Triggers: On expiry of T3360 and a retransmission of auth and cipher request. Availability: per GPRS service, per RA Type: Counter	Int32
3G-auth-cipher-response	Description: Total authentication and ciphering request response messages for 3G service. Triggers: Whenever the MS sends a authentication and cipher response message. Availability: per SGSN service, per RA Type: Counter	Int32
2G-auth-cipher-response	Description: Total authentication and ciphering request response messages for 2G service. Triggers: Whenever the MS sends a authentication and cipher response message. Availability: per GPRS service Type: Counter	Int32
3G-auth-cipher-rsp-sres-mismatch	Description: Indicates the number of authentication and cipher responses received, in 3G service, with mismatching xres/sres values. Triggers: When a mismatching Xres is received in auth-response. Availability: per SGSN service, per RA Type: Counter	Int32
2G-auth-cipher-rsp-sres-mismatch	Description: Indicates the number of authentication and cipher responses received, in 2G service, with mismatching xres/sres values. Triggers: When a mismatching Xres is received in auth-response. Availability: per GPRS service, per RA Type: Counter	Int32
3G-auth-cipher-reject	Total authentication and ciphering request reject messages for 3G service.	Int32
2G-auth-cipher-reject	Total authentication and ciphering request reject messages for 2G service.	Int32
3G-auth-cipher-rej-xres-mismatch	Description: Indicates the number of auth and cipher rejects sent by the SGSN due to xres not matching in 3G. Triggers: When auth-response has an xres mismatch and the SGSN proceeds to reject the MS because of it. Availability: per SGSN service, per RA Type: Counter	Int32
2G-auth-cipher-rej-xres-mismatch	Description: Indicates the number of auth and cipher rejects sent by the SGSN due to xres not matching in 2G. Triggers: When auth-response has an xres mismatch and the SGSN proceeds to reject the MS because of it. Availability: per GPRS service, per RA Type: Counter	Int32
3G-auth-cipher-rej-sync-not-have-auts	Description: Indicates the number of auth and cipher rejects sent by the SGSN in 3G when a SYNC failure is received without the AUTS parameter. Triggers: When an auth-failure message, with cause SYNC failure, is received but there is no AUTS (authentication token for re-synchronization) parameter. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-auth-cipher-rej-sync-not-have-auts	Description: Indicates the number of auth and cipher rejects sent by the SGSN in 2G when a SYNC failure is received without the AUTS parameter. Triggers: When an auth-failure message, with cause SYNC failure, is received but there is no AUTS (authentication token for re-synchronization) parameter. Availability: per GPRS service, per RA Type: Counter	Int32
3G-auth-cipher-rej-many-sync-fail	Description: Indicates the number of auth and cipher rejects sent by the SGSN in 3G when there was more than one SYNC failure. Triggers: When SGSN receives an auth-failure message with SYNC failure more than once in the same authentication procedure. Availability: per SGSN service, per RA Type: Counter	Int32
2G-auth-cipher-rej-many-sync-fail	Description: Indicates the number of auth and cipher rejects sent by the SGSN in 2G when there was more than one SYNC failure. Triggers: When SGSN receives an auth-failure message with SYNC failure more than once in the same authentication procedure. Availability: per GPRS service, per RA Type: Counter	Int32
3G-auth-cipher-rej-many-mac-fail	Description: Indicates the number of auth and cipher rejects sent by the SGSN in 3G when there was more than one MAC failure. Triggers: When SGSN receives an auth-failure message with MAC failure more than once in the same authentication procedure. Availability: per SGSN service, per RA Type: Counter	Int32
2G-auth-cipher-rej-many-mac-fail	Description: Indicates the number of auth and cipher rejects sent by the SGSN in 2G when there was more than one MAC failure. Triggers: When SGSN receives an auth-failure message with MAC failure more than once in the same authentication procedure. Availability: per GPRS service, per RA Type: Counter	Int32
3G-auth-cipher-mac-fail	Description: Total authentication and ciphering failed due to message authentication code (MAC) failure in 3G service. Triggers: When a authorization and cipher failure message is received with this cause. Availability: per SGSN service, per RA Type: Counter	Int32
2G-auth-cipher-mac-fail	Description: Total authentication and ciphering failed due to message authentication code (MAC) failure for 2G service. Triggers: When a authorization and cipher failure message is received with this cause. Availability: per GPRS service Type: Counter	Int32
3G-auth-cipher-syn-fail	Description: Total number of authentication and cipher procedure failures messages received with cause "SYNC failure" in 3G service. Triggers: When a authorization and cipher failure message is received with this cause. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-auth-cipher-syn-fail	Description: Total number of authentication and cipher procedure failures messages received with cause “SYNC failure” in 2G service. Triggers: When a authorization and cipher failure message is received with this cause. Availability: per GPRS service Type: Counter	Int32
3G-auth-unacceptable	Description: Total number of authentication and cipher procedure fail messages received with cause “authentication unacceptable” in 3G service. Triggers: When a authorization and cipher failure message is received with this cause. Availability: per SGSN service, per RA Type: Counter	Int32
2G-auth-unacceptable	Indicates the number of authentication and cipher procedure fail messages received with cause “authentication unacceptable” in 2G service. Triggers: When a authorization and cipher failure message is received with this cause. Availability: per GPRS service Type: Counter	Int32
3G-ptmsi-realloc	Description: Total Packet-Temporary Mobile Subscriber Identity reallocation procedure for 3G service. Type: Counter	Int32
2G-ptmsi-realloc	Description: Total Packet-Temporary Mobile Subscriber Identity reallocation procedure for 2G service. Type: Counter	Int32
3G-ret-ptmsi-realloc	Description: Total number of PTMSI-Reallocation commands retransmitted in the 3G service. Triggers: Increments on expiry of T3350 timer and a retransmission of the PTMSI-Reallocation command. Availability: per SGSN service, per RA Type: Counter	Int32
2G-ret-ptmsi-realloc	Description: Total number of PTMSI-Reallocation commands retransmitted in the 2G service. Triggers: Increments on expiry of T3350 timer and a retransmission of the PTMSI-Reallocation command. Availability: per GPRS service, per RA Type: Counter	Int32
3G-ptmsi-realloc-complete	Description: Total number of PTMSI-Reallocation Complete messages received at 3G. Triggers: Increments when we receive a PTMSI Realloc Complete from MS in 3G. Availability: per SGSN service, per RA Type: Counter	Int32
2G-ptmsi-realloc-complete	Description: Total number of PTMSI-Reallocation Complete messages received at 2G. Triggers: Increments when we receive a PTMSI Realloc Complete from MS in 2G. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-imsi-identity-request	Description: Total number of identity request messages sent with identity type as “IMSI” in 3G service. Triggers: When the SGSN initiates a Identity request to know the IMSI of the subscriber. This is done when: - Unknown local P-TMSI attach is received. - GTP-Identity with peer SGSN failed on a peer SGSN P-TMSI attach. - Authenticate response X-RES mismatch and the IMSI was not ascertained from the MS itself. - On a MAC failure and the IMSI was not ascertained from the MS itself. Availability: per SGSN service, per RA Type: Counter	Int32
2G-imsi-identity-request	Description: Total number of identity request messages sent with identity type as “IMSI” in 2G service. Triggers: When the SGSN initiates an identity request to know the IMSI of the subscriber due to unknown local-PTMSI attach is received or GTP identity with Peer SGSN failed on a Peer SGSN PTMSI attach. Availability: per GPRS service Type: Counter	Int32
3G-imei-identity-request	Description: Total number of identity request messages sent with identity type as “IMEI” for 3G service. Triggers: When the SGSN initiates an identity request to know the IMEI of the UE due to unknown local-PTMSI attach is received or GTP identity with Peer SGSN failed on a Peer SGSN PTMSI attach. Availability: per SGSN service Type: Counter	Int32
2G-imei-identity-request	Description: Total number of identity request messages sent with identity type as “IMEI” for 2G service. Triggers: When the SGSN initiates an identity request to know the IMEI of the subscriber due to unknown local-PTMSI attach is received or GTP identity with Peer SGSN failed on a Peer SGSN PTMSI attach. Availability: per GPRS service Type: Counter	Int32
3G-imeisv-identity-request	Description: Total number of identity request messages sent with identity type as “IMEI-SV” for 3G service. Triggers: When the SGSN initiates an identity request to know the IMEI-SV of the UE due to unknown local-PTMSI attach is received or GTP identity with Peer SGSN failed on a Peer SGSN PTMSI attach. Availability: per SGSN service, per RA Type: Counter	Int32
2G-imeisv-identity-request	Description: Total number of identity request messages sent with identity type as “IMEI-SV” for 2G service. Triggers: When the SGSN initiates an identity request to know the IMEI-SV of the subscriber due to unknown local-PTMSI attach is received or GTP identity with Peer SGSN failed on a Peer SGSN PTMSI attach. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-tmsi-identity-request	Description: Total number of identity request messages sent with identity type as “T-IMSI” for 3G service. Triggers: When the SGSN initiates an identity request to know the temporary IMSI of the subscriber due to unknown local-PTMSI attach is received or GTP identity with Peer SGSN failed on a Peer SGSN PTMSI attach. Availability: per SGSN service, per RA Type: Counter	Int32
2G-tmsi-identity-request	Description: Total number of identity request messages sent with identity type as “IMSI” for 2G service. Triggers: When the SGSN initiates an identity request to know the IMSI of the subscriber due to unknown local-PTMSI attach is received or GTP identity with Peer SGSN failed on a Peer SGSN PTMSI attach. Availability: per GPRS service Type: Counter	Int32
3G-ret-imsi-identity-request	Total number of IMSI identity request messages retransmitted for 3G service.	Int32
2G-ret-imsi-identity-request	Total number of IMSI identity request messages retransmitted for 2G service.	Int32
3G-ret-imei-identity-request	Total number of IMEI identity request messages retransmitted for 3G service.	Int32
2G-ret-imei-identity-request	Total number of IMEI identity request messages retransmitted for 2G service.	Int32
3G-ret-imeisv-identity-request	Total number of IMEI-SV identity request messages retransmitted for 3G service.	Int32
2G-ret-imeisv-identity-request	Total number of IMEI-SV identity request messages retransmitted for 2G service.	Int32
3G-ret-tmsi-identity-request	Total number of temporary IMS identity request messages retransmitted for 3G service.	Int32
2G-ret-tmsi-identity-request	Total number of temporary IMSI identity request messages retransmitted for 2G service.	Int32
3G-imsi-identity-response	Description: Total number of identity response messages received with MS identity of type “IMSI” for 3G service. Triggers: When the SGSN receives an Identity response initiated to an identity request initiated of identity type IMSI. Availability: per SGSN service, per RA Type: Counter	Int32
2G-imsi-identity-response	Description: Total number of identity response messages received with MS identity of type “IMSI” for 2G service. Triggers: When the SGSN receives an Identity response initiated to an identity request initiated of identity type IMSI. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-imei-identity-response	Description: Total number of identity response messages received with MS identity of type “IMEI” for 3G service. Triggers: When the SGSN receives an Identity response initiated to an identity request initiated of identity type IMEI. Availability: per SGSN service, per RA Type: Counter	Int32
2G-imei-identity-response	Description: Total number of identity response messages received with MS identity of type “IMEI” for 2G service. Triggers: When the SGSN receives an Identity response initiated to an identity request initiated of identity type IMEI. Availability: per GPRS service Type: Counter	Int32
3G-imeisv-identity-response	Description: Total number of identity response messages received with MS identity of type “IMEI-SV” for 3G service. Triggers: When the SGSN receives an Identity response initiated to an identity request initiated of identity type IMEI-SV. Availability: per SGSN service, per RA Type: Counter	Int32
2G-imeisv-identity-response	Description: Total number of identity response messages received with MS identity of type “IMEI-SV” for 2G service. Triggers: When the SGSN receives an Identity response initiated to an identity request initiated of identity type IMEI-SV. Availability: per GPRS service Type: Counter	Int32
3G-unknown-identity-response	Total number of unknown identity response sent for 3G service.	Int32
2G-unknown-identity-response	Total number of unknown identity response sent for 2G service.	Int32
3G-tmsi-identity-response	Total number of temporary IMSI identity response messages sent for 3G service.	Int32
2G-tmsi-identity-response	Total number of temporary IMSI identity response messages sent for 2G service.	Int32
new-connection-rejected-overload	Description: This proprietary counter indicates the total number of new connection (inter-SGSN RAU and/or Attach) requests that were rejected due to an overload situation. Triggers: 1) A congestion control mechanism is configured so that any new connection request received, that goes beyond the set threshold, will be rejected. 2) A network overload control feature is enabled and configured to accept new connections only at a defined rate. Incoming requests are buffered in a queue. When the queue is full additional requests can be rejected. Availability: per SGSN Service Type: Counter	Int32
3G-T3350-expiry	Total number of times the T3350 timer timed-out for 3G service.	Int32
2G-T3350-expiry	Total number of times the T3350 timer timed-out for 2G service.	Int32

Variables	Description	Data Type
3G-T3360-expiry	Total number of times the T3360 timer timed-out for 3G service.	Int32
2G-T3360-expiry	Total number of times the T3360 timer timed-out for 2G service.	Int32
3G-T3370-expiry	Total number of times the T3370 timer timed-out for 3G service.	Int32
2G-T3370-expiry	Total number of times the T3370 timer timed-out for 2G service.	Int32
3G-T3322-expiry	Total number of times the T3322 timer timed-out for 3G service.	Int32
2G-T3322-expiry	Total number of times the T3322 timer timed-out for 2G service.	Int32
3G-T3313-expiry	Total number of times the T3313 timer timed-out for 3G service.	Int32
2G-T3313-expiry	Total number of times the T3313 timer timed-out for 2G service.	Int32
2G-ready-timer-expiry	Total number of times the 2G service ready timer timed-out.	Int32
exist-conn-proc-rej-overload	Description: This proprietary counter indicates the total number of ongoing procedures rejected or skipped due to an overload indication received from the RNCs. When an overload indication is received from an RNC, the SGSN can reduce the signaling load on the RNC by doing one or more of the following: - dropping attaches, - dropping service requests for data, - skipping PTMSI reallocation, - skipping authentication The preferred action is configurable. Triggers: Counter increments when connection is dropped due to overload. Availability: per SGSN Type: Counter	Int32
Rnc-overload-attach-dropped	Total number of Attach Requests dropped due to overload at RNC.	Int32
Rnc-overload-service-req-dropped	Total number of service requests dropped due to overload at RNC.	Int32
Rnc-overload-skip-ptmsi-realloc	Total number of P-TMSI reallocation procedure skipped due to overload at RNC.	Int32
Rnc-overload-skip-auth	Total number of authentication procedure skipped due to overload at RNC.	Int32
Initial-UE-Rcvd	Total number of initial user equipment (UE) messages received.	Int32
Direct-Trans-Rcvd	Total number of common identifier messages sent.	Int32
Direct-Trans-Sent	Total number of direct transfer messages sent.	Int32
common-id-sent	Total number of direct transfer messages received.	Int32
sec-mode-command	Total number of security mode commands received.	Int32
sec-mode-complete	Total number of security mode completed.	Int32
sec-mode-reject	Total number of security mode commands rejected.	Int32
Iu-release-request	Total number of Iu interface release request received.	Int32

Variables	Description	Data Type
Iu-release-command	Total number of Iu interface release commands received.	Int32
Iu-release-complete	Total number of Iu interface release completed.	Int32
Reset-received	Total number of reset requests received.	Int32
Retransmitted-reset-received	Total number of retransmitted reset requests received.	Int32
Reset-Ack-sent	Total number of reset request acknowledgement sent.	Int32
Reset-sent	Total number of reset requests sent.	Int32
Retransmitted-reset-sent	Total number of reset requests retransmitted.	Int32
Reset-Ack-received	Total number of reset request acknowledgement received.	Int32
Resource-reset-received	Total number of resource reset requests received.	Int32
Resource-reset-ack-sent	Total number of resource reset request acknowledgement sent.	Int32
Resource-reset-sent	Total number of resource reset request sent.	Int32
Resource-reset-ack-received	Total number of resource reset request acknowledgement received.	Int32
Overload-control-rcvd	Total number of resource overload control message received.	Int32
Pc-congested-rcvd	Total number of point code (PC) congested message received.	Int32
Error-indication-rcvd	Total number of error indication message received.	Int32
Error-indication-sent	Total number of error indication message sent.	Int32
Relocation-required	Total number of message received for Serving Radio Network Subsystem (SRNS) relocation required.	Int32
Relocation-command	Total number of message received with SRNS relocation command.	Int32
Relocation-request	Total number of SRNS relocation requests received.	Int32
Relocation-request-ack	Total number of SRNS relocation requests Ack sent.	Int32
Relocation-failure	Total number of SRNS relocation failure messages received.	Int32
Relocation-prep-failure	Total number of SRNS relocation preparation failure messages received.	Int32
Relocation-cancel	Total number of SRNS relocation cancel messages received.	Int32
Relocation-cancel-ack	Total number of SRNS relocation cancel acknowledge messages sent.	Int32

Variables	Description	Data Type
Relocation-detect	Total number of SRNS relocation detected.	Int32
Relocation-complete	Total number of SRNS relocation completed.	Int32
Forward-sms-context	Total number of SRNS contexts forwarded.	Int32
GMM-received-nas-pdu	Total protocol data units received by GPRS mobility management (GMM) service through NAS interface.	Int32
GMM-sent-nas-pdu	Total protocol data units sent by GMM service through NAS interface.	Int32
SM-received-nas-pdu	Total protocol data units received by Service Management (SM) service through NAS interface.	Int32
SM-sent-nas-pdu	Description: Total protocol data units sent by SM service through NAS interface. Type: Counter	Int32
SMS-received-nas-pdu	Description: Total protocol data units received by short message service (SMS) through NAS interface. Type: Counter	Int32
SMS-sent-nas-pdu	Description: Total protocol data units sent by short message service (SMS) through NAS interface. Type: Counter	Int32
SMS-unexpected-nas-pdu	Description: Total unexpected type of protocol data units received by short message service (SMS) through NAS interface. Type: Counter	Int32
Unidentified-nas-pdu	Description: Total number of unknown type PDUs received through NAS interface. Type: Counter	Int32
exist-conn-proc-rej-overload	Description: Total number of existing procedures rejected due to overload. Type: Counter	
3G-ptmsi-signature-mismatch-attach	Description: Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in attach procedures for 3G service. Type: Counter	Int32
2G-ptmsi-signature-mismatch-attach	Description: Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in attach procedures for 2G service. Type: Counter	Int32
3G-ptmsi-signature-mismatch-detach	Description: Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in detach procedures for 3G service. Type: Counter	Int32
2G-ptmsi-signature-mismatch-detach	Description: Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in detach procedures for 2G service. Type: Counter	Int32
3G-ptmsi-signature-mismatch-rau	Description: Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in routing area update procedures for 3G service. Type: Counter	Int32

Variables	Description	Data Type
2G-ptmsi-signature-mismatch-rau	Description: Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in routing area update procedures for 2G service. Type: Counter	Int32
3G-total-actv-req	Description: Total number of request messages received for 3G context activation including primary and secondary type. Type: Counter	Int32
2G-total-actv-req	Description: Total number of request messages received for 2G context activation including primary and secondary type. Type: Counter	Int32
3G-total-actv-accept	Description: Total number of request messages accepted for 3G context activation including primary and secondary type. Triggers: Increments when the SGSN sends Activate Accept or Activate Secondary Accept to the MS upon successful PDP Activation. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-total-actv-accept	Description: Total number of request messages accepted for 2G context activation including primary and/or secondary type. Triggers: Increments when the SGSN sends Activate Accept or Activate Secondary Accept to the MS upon successful PDP Activation. Availability: per GPRS service Type: Counter	Int32
3G-total-num-actv-pdp	Description: Total number of active PDP context (primary and secondary type) for 3G service in SGSN. Triggers: 1) Increments when the context is completely active in the SGSN. 2) Decrements when the context is deleted from the SGSN. Availability: per SGSN service, per RAI Type: Gauge	Int32
2G-total-num-actv-pdp	Description: Total number of active PDP context (primary and secondary type) for 2G service in SGSN. Triggers: 1) Increments when the context is completely active in the SGSN. 2) Decrements when the context is deleted from the SGSN. Availability: per GPRS service Type: Gauge	Int32
3G-total-actv-pdp-with-dir-tunnel	Description: Total number of active PDP context (primary and secondary type) for 3G service with direct tunnel enabled. Triggers: 1) Increments when the context is completely active in the SGSN with Direct tunnel established 2) Decrements when the context is deleted from the SGSN or when direct tunnel is removed Availability: per SGSN service, per RAI Type: Gauge.	Int32
3G-primary-actv-req	Total number of request messages received for 3G primary PDP context activation. Type: Counter.	Int32

Variables	Description	Data Type
2G-primary-actv-req	Total number of request messages received for 2G primary PDP context activation. Type: Counter.	Int32
3G-primary-actv-req-nrpca	Total number of request messages received for 3G primary PDP context activation from network side. Type: Counter.	Int32
3G-primary-req-act-pdp	Total number of requests to activate primary PDP context for 3G service. Type: Counter.	Int32
3G-primary-req-act-pdp-retrans	Total number of requests retransmitted to activate primary PDP context for 3G service. Type: Counter.	Int32
3G-primary-actv-accept	Total number of requests accepted to activate primary PDP context for 3G service. Type: Counter.	Int32
2G-primary-actv-accept	Total number of requests accepted to activate primary PDP context for 2G service. Type: Counter.	Int32
3G-total-actv-reject	Description: Total number of requests to activate PDP context (primary and secondary) rejected for 3G service. Triggers: Increments when the SGSN sends Activate Reject or Activate Secondary Reject to the MS. Availability: per SGSN service, per RAI Type: Counter	Int32
3G-total-actv-reject-internal	Description: This proprietary counter tracks the total number of Primary and Secondary PDP Activation Rejects due to internal triggers. Triggers: SGSN sends an Activate Reject or Activate Secondary Reject to MS due to internal triggers. Availability: per SGSN service, per RA Type: Counter	Int32
3G-total-actv-reject-external	Description: This proprietary counter tracks the total number of Primary and Secondary PDP Activation Rejects due to external triggers. Triggers: SGSN sends an Activate Reject or Activate Secondary Reject to MS due to external triggers. Availability: per SGSN service, per RA Type: Counter	Int32
2G-total-actv-reject	Description: Total number of requests to activate PDP context (primary and secondary) rejected for 2G service. Triggers: Increments when the SGSN sends Activate Reject or Activate Secondary Reject to the MS. Availability: per GPRS service Type: Counter	Int32
3G-primary-actv-reject	Total number of requests rejected to activate primary PDP context for 3G service. Type: Counter	Int32
2G-primary-actv-reject	Total number of requests rejected to activate primary PDP context for 2G service. Type: Counter	Int32
3G-secondary-actv-req	Total number of requests to activate secondary PDP context for 3G service. Type: Counter	Int32

Variables	Description	Data Type
2G-secondary-actv-req	Total number of requests to activate secondary PDP context for 2G service. Type: Counter	Int32
3G-secondary-actv-acc	Total number of requests to activate secondary PDP context for 3G service accepted. Type: Counter	Int32
2G-secondary-actv-acc	Total number of requests to activate secondary PDP context for 2G service accepted. Type: Counter	Int32
3G-secondary-actv-rej	Total number of requests to activate secondary PDP context for 3G service rejected. Type: Counter	Int32
2G-secondary-actv-rej	Total number of requests to activate secondary PDP context for 2G service rejected. Type: Counter	Int32
3G-actv-rej-odb	Description: Total number of requests to activate PDP context for 3G service rejected due to operator determined barring. Type: Counter	Int32
2G-actv-rej-odb	Description: Total number of requests to activate PDP context for 2G service rejected due to operator determined barring. Type: Counter	Int32
3G-actv-rej-insufficient-resources	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected due to one of the following: - Resource allocation failures (memory, GTP-C Teid, GTP-U Teid, etc.) in SGSN - Incorrect information sent by GGSN in CPC response (PDP Type modified by GGSN, missing PDP IP address, etc. - SNDCP activation failure Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
3G-actv-rej-insufficient-resources-ext	Description: This proprietary counter tracks the total number of Primary PDP Activation Rejects, with 'insufficient resources' as cause, due to external triggers. Triggers: The counter increments when one of the following occurs: - Qos Negotiation Failure with GGSN or QoS not present in activation request. - Operator policy restrictions. - GGSN Has No Memory sent as the cause in the CPC response. - GGSN Changed PDP Type in the CPC response. - GGSN PDP Addr Alloc Failure. - RNC GTPU Path Failure when activation is in progress. - RNC RAB Establishment Failure. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-actv-rej-insufficient-resources-int	Description: This proprietary counter tracks the total number of Primary PDP Activation Rejects, with 'insufficient resources' as cause, due to internal triggers. Triggers: SGSN has no memory to process the activation procedure. Availability: per SGSN service, per RA Type: Counter	Int32
2G-actv-rej-insufficient-resources	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected due to: • Resource allocation failures (memory, GTP-C Teid, GTP-U Teid, etc.) in SGSN • Incorrect information sent by GGSN in CPC response (PDP Type modified by GGSN, missing PDP IP address, etc.) • SMDCP activation failure Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS Service, RAI Type: Counter	Int32
3G-actv-rej-network-failure	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected due to network failure. Triggers: Increments when the SGSN sends Activate Reject due to SGSN operator policy restrictions and the cause code was configured as Network failure. Activations can be rejected due to SGSN operator policy in which the reject cause is configurable. Availability: per SGSN service, per RAI Type: Counter	Int32
3G-actv-rej-network-failure-ext	Description: This proprietary counter tracks the total number of Primary PDP Activation Rejects, with 'network failure' as cause, due to external triggers. Triggers: The counter increments when any one of the following occurs: • GTPC path failure, • DNS failure, • UPCR with system failure (UPCQ triggered due to change in Qos in RAB rsp, UPCQ triggered due to Direct-Tunnel) Availability: per SGSN service, per RA Type: Counter	Int32
3G-actv-rej-network-failure-int	Description: This proprietary counter tracks the total number of Primary PDP Activation Rejects, with 'network failure' as cause, due to internal triggers. Triggers: No internal triggers at this time - this statistic is a placeholder for future development. Availability: per SGSN service, per RA Type: Counter	Int32
2G-actv-rej-network-failure	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected due to network failure. Triggers: Increments when the SGSN sends Activate Reject due to SGSN operator policy restrictions and the cause code was configured as Network failure. Activations can be rejected due to SGSN operator policy in which the reject cause is configurable. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-actv-rej-missing-or-unknown-apn	Description: Total number of requests to activate PDP context for 3G service rejected due to APN related errors such as: • APN not present in Activate Request but multiple subscription records exist • DNS query fails for APN to GGSN resolution • Missing/Unknown APN received from GGSN Triggers: Increments when the SGSN sends Activate Reject for all the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-actv-rej-missing-or-unknown-apn	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected due to APN related errors such as: • APN not present in Activate Request but multiple subscription records exist • DNS query fails for APN to GGSN resolution • Missing/Unknown APN received from GGSN Triggers: Increments when the SGSN sends Activate Reject for all the above conditions. Availability: per GPRS service Type: Counter	Int32
3G-actv-rej-unknown-pdp-addr-type	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected due to PDP Address related errors such as: • PDP Address requested in Activate Request but PDP Address Type not requested • APN requested in Activate Request without PDP Address Type • Unknown PDP Address or Type error received in Create PDP Context Response from GGSN Triggers: Increments when the SGSN sends Activate Reject for all the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-actv-rej-unknown-pdp-addr-type	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected due to PDP Address related errors such as: • PDP Address requested in Activate Request but PDP Address Type not requested • APN requested in Activate Request without PDP Address Type • Unknown PDP Address or Type error received in Create Pdp Context Response from GGSN Triggers: Increments when the SGSN sends Activate Reject for all the above conditions. Availability: per GPRS service Type: Counter	Int32
3G-actv-rej-usr-auth-failed	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected due to user authentication failure on GGSN. Triggers: Increments when the SGSN receives Create PDP Context Response with authentication failure cause. Availability: per SGSN service, per RAI Type: Counter	Int32

Variables	Description	Data Type
2G-actv-rej-usr-auth-failed	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected due to user authentication failure on GGSN. Triggers: Increments when the SGSN receives Create PDP Context Response with authentication failure cause. Availability: per GPRS service Type: Counter	Int32
3G-actv-rej-by-ggsn	Description: Total number of requests sent to MS to activate PDP context for 3G service due to receiving Create PDP Context Response from GGSN with a cause of: • "Insufficient resources" • "All Dynamic PDP address occupied" Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-actv-rej-by-ggsn	Description: Total number of requests sent to MS to activate PDP context for 2G service due to receiving Create PDP Context Response from GGSN with a cause of: • "Insufficient resources" • "All Dynamic PDP address occupied" Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS service, per RAI Type: Counter	Int32
3G-actv-rej-unspecified-error	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected due to: • Receiving Create PDP Context Response from GGSN with a cause of "system failure" • GGSN fails to respond to CPC Request • SGSN triggers PDP deletion before receiving CPC response from GGSN • HLR triggers PDP deletion before receiving CPC response ("Delete Subscriber Data" received from HLR for the PDP) Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
3G-actv-rej-unspecified-error-ext	Description: This proprietary counter tracks the total number of Primary PDP Activation Rejects, with 'unspecified error' as cause, due to external triggers. Triggers: The counter increments when any one of the following occurs: • CPCR with System failure • CAMEL Release Req during activation • No response for CPCR, UPCR during Activation (UPCQ triggered due to change in QoS in RAB rsp/Direct Tunnel) Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-actv-rej- unspecified-error-int	Description: This proprietary counter tracks the total number of Primary PDP Activation Rejects, with 'unspecified error' as cause, due to internal triggers. Triggers: No internal triggers at this time - this statistic is a placeholder for future development. Availability: per SGSN service, per RA Type: Counter	Int32
2G-actv-rej- unspecified-error	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected due to: - Receiving Create PDP Context Response from GGSN with a cause of "system failure" - GGSN fails to respond to CPC Request - SGSN triggers PDP deletion before receiving CPC response from GGSN - HLR triggers PDP deletion before receiving CPC response ("Delete Subscriber Data" received from HLR for the PDP) Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS service Type: Counter	Int32
3G-actv-rej-service- not-supported	Description: Total number of requests to activate PDP context for 3G service rejected as requested service is not supported. Triggers: Increments when the SGSN sends Activate Reject due to SGSN operator policy restrictions and the cause code was configured as Service Not Supported. Activations can be rejected due to SGSN operator policy in which the reject cause is configurable. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-actv-rej-service- not-supported	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected as requested service is not supported. Triggers: Increments when the SGSN sends Activate Reject due to SGSN operator policy restrictions and the cause code was configured as Service Not Supported. Activations can be rejected due to SGSN operator policy in which the reject cause is configurable. Availability: per GPRS service Type: Counter	Int32
3G-actv-rej-service- not-subscribed	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected as subscriber is not subscribed to requested service due to: - APN Selection failures such as: - Requested APN/PDP-Type/PDP-Addr not matching the subscription. - Wild card APN requested but multiple subscription records exist for the subscriber. - APN Access denied, No subscription error was received in Create PDP Context Response from GGSN. Triggers: Increments when the SGSN sends Activate Reject for all the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32

Variables	Description	Data Type
2G-actv-rej-service-not-subscribed	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected as subscriber is not subscribed to requested service due to: - APN selection failures such as: - Requested APN/PDP-Type/PDP-Addr not matching the subscription. - Wild card APN requested but multiple subscription records exist for the subscriber. - APN Access denied and No subscription error was received in Create PDP Context Response from GGSN. Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS service Type: Counter	Int32
3G-actv-rej-svc-opt-tmp-out-of-order	Total number of requests to activate PDP context for 3G service rejected as requested service option is temporarily out of order. Type: Counter	Int32
3G-actv-rej-svc-opt-tmp-out-of-order-int	Description: This proprietary counter tracks the total number of Primary PDP Activation Rejects, with 'service option temporarily out of order' as cause, due to internal triggers. Triggers: No internal triggers at this time - this statistic is a placeholder for future development. Availability: per SGSN service, per RA Type: Counter	Int32
3G-actv-rej-svc-opt-tmp-out-of-order-ext	Description: This proprietary counter tracks the total number of Primary PDP Activation Rejects, with 'service option temporarily out of order' as cause, due to external triggers. Triggers: SRNS during Activation. Availability: per SGSN service, per RA Type: Counter	Int32
2G-actv-rej-svc-opt-tmp-out-of-order	Total number of requests to activate PDP context for 2G service rejected as requested service option is temporarily out of order. Type: Counter	Int32
3G-actv-rej-apn-restriction-incompatible	Total number of requests to activate PDP context for 3G service rejected due to restriction of APN or incompatibility of APN for service. Type: Counter	Int32
2G-actv-rej-apn-restriction-incompatible	Total number of requests to activate PDP context for 2G service rejected due to restriction of APN or incompatibility of APN for service. Type: Counter	Int32
3G-actv-rej-semantically-incorrect	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected due to semantically incorrect IE message in Activate PDP Request. Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-actv-rej-semantically-incorrect	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected due to semantically incorrect IE message in Activate PDP Request. Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS service, per RAI Type: Counter	Int32

Variables	Description	Data Type
3G-actv-rej-invalid-mandatory-info	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected due to invalid mandatory IE in Activate PDP Request. Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-actv-rej-invalid-mandatory-info	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected due to invalid mandatory IE in Activate PDP Request. Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS service, per RAI Type: Counter	Int32
3G-actv-rej-msg-type-non-existent	Total number of requests to activate PDP context for 3G service rejected due to non-existent type of message. Type: Counter	Int32
2G-actv-rej-msg-type-non-existent	Total number of requests to activate PDP context for 3G service rejected due to non-existent type of message. Type: Counter	Int32
3G-actv-rej-ie-non-existent	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected upon receiving Create PDP Context Response from GGSN with a cause of "Mandatory IE missing". Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-actv-rej-ie-non-existent	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected upon receiving Create PDP Context Response from GGSN with a cause of "Mandatory IE missing". Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS service, per RAI Type: Counter	Int32
3G-actv-rej-conditional-ie-err	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected due to conditional IE (Information Element) error in Activate PDP Request. Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-actv-rej-conditional-ie-err	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected due to conditional IE (Information Element) error in Activate PDP Request. Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS service, per RAI Type: Counter	Int32
3G-actv-rej-msg-not-compatible-with-prot-state	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected as message type is not compatible with protocol state. Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32

Variables	Description	Data Type
2G-actv-rej-msg-not-compatible-with-prot-state	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected as message type is not compatible with protocol state. Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS service, per RAI Type: Counter	Int32
3G-actv-rej-recovery-on-timer-expiry	Total number of requests to activate PDP context for 3G service rejected as timer expired for recovery. Type: Counter	Int32
2G-actv-rej-recovery-on-timer-expiry	Total number of requests to activate PDP context for 2G service rejected as timer expired for recovery. Type: Counter	Int32
3G-actv-rej-prot-err-unspecified	Description: Total number of requests sent to MS to activate PDP context for 3G service rejected upon receiving Create PDP Context Response from GGSN with a cause of "unspecified protocol error". Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-actv-rej-prot-err-unspecified	Description: Total number of requests sent to MS to activate PDP context for 2G service rejected upon receiving Create PDP Context Response from GGSN with a cause of "unspecified protocol error". Triggers: Increments when the SGSN sends Activate Reject for the above conditions. Availability: per GPRS service, per RAI Type: Counter	Int32
2G-actv-rej-llc-sndcp-fail	This statistic has been deprecated.	Int32
2G-actv-rej-qos-not-acc	This statistic has been deprecated.	Int32
3G-actv-rej-semantic-error-tft-operation	This statistic has been deprecated.	Int32
2G-actv-rej-semantic-error-tft-operation	This statistic has been deprecated.	Int32
3G-actv-rej-syntax-err-in-tft-operation	This statistic has been deprecated.	Int32
2G-actv-rej-syntax-err-in-tft-operation	This statistic has been deprecated.	Int32
3G-actv-rej-unknown-pdp-context	This statistic has been deprecated.	Int32
2G-actv-rej-unknown-pdp-context	This statistic has been deprecated.	Int32

Variables	Description	Data Type
3G-actv-rej-semantic-err-in-pkt-filter	This statistic has been deprecated.	Int32
2G-actv-rej-semantic-err-in-pkt-filter	This statistic has been deprecated.	Int32
3G-actv-rej-syntax-err-in-pkt-filter	This statistic has been deprecated.	Int32
2G-actv-rej-syntax-err-in-pkt-filter	This statistic has been deprecated.	Int32
3G-actv-rej-pdp-notft-actv	This statistic has been deprecated.	Int32
2G-actv-rej-pdp-notft-actv	This statistic has been deprecated.	Int32
3G-sec-actv-rej-odb	Total number of requests to activate secondary PDP context for 3G service rejected due to operator determined barring. Type: Counter	Int32
2G-sec-actv-rej-odb	Total number of requests to activate secondary PDP context for 2G service rejected due to operator determined barring. Type: Counter	Int32
3G-sec-actv-rej-insufficient-resources	Total number of requests to activate secondary PDP context for 3G service rejected due to insufficient resources. Type: Counter	Int32
3G-sec-actv-rej-insufficient-resources-ext	Description: This proprietary counter tracks the total number of Secondary PDP Activation Rejects, with 'insufficient resources' as cause, due to external triggers. Triggers: Increments when any one of the following occurs: • QoS Negotiation Failure with GGSN or QoS not present in activation request. • Operator policy restrictions. • GGSN Has No Memory sent as the cause in the CPCR. • RNC GTPU Path Failure when activation is in progress. • RNC RAB Establishment Failure. • Activation request when Bundle deactivation is in progress. • Activation request when Primary PDP context activated is GTPv0. Availability: per SGSN service, per RA Type: Counter	Int32
3G-sec-actv-rej-insufficient-resources-int	Description: This proprietary counter tracks the total number of Secondary PDP Activation Rejects, with 'insufficient resources' as cause, due to internal triggers. Triggers: SGSN has no memory to process the activation procedure. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
2G-sec-activ-rej-insufficient-resources	Total number of requests to activate secondary PDP context for 2G service rejected due to insufficient resources. Type: Counter	Int32
3G-sec-activ-rej-by-ggsn	Total number of requests to activate secondary PDP context for 3G service rejected as request rejected by the GGSN. Type: Counter	Int32
2G-sec-activ-rej-by-ggsn	Total number of requests to activate secondary PDP context for 2G service rejected as request rejected by the GGSN. Type: Counter	Int32
3G-sec-activ-rej-unspecified-error	Description: Total number of requests to activate secondary PDP context for 3G service rejected due to error which is not specified in this table or unknown. Type: Counter	Int32
3G-sec-activ-rej-unspecified-error-ext	Description: This proprietary counter tracks the total number of Secondary PDP Activation Rejects, with 'unspecified error' as cause, due to external triggers. Triggers: The counter increments when any one of the following occurs: • CPCR with System failure • CAMEL Release Req during activation • No response for CPCR,UPCR during Activation (UPCQ triggered due to change in Qos in RAB rsp/Direct Tunnel) Availability: per SGSN service, per RA Type: Counter	Int32
3G-sec-activ-rej-unspecified-error-int	Description: This proprietary counter tracks the total number of Secondary PDP Activation Rejects, with 'unspecified error' as cause, due to internal triggers. Triggers: No internal triggers at this time - this statistic is a placeholder for future development. Availability: per SGSN service, per RA Type: Counter	Int32
2G-sec-activ-rej-unspecified-error	Total number of requests to activate secondary PDP context for 2G service rejected due to error which is not specified in this table or unknown. Type: Counter	Int32
3G-sec-activ-rej-service-not-supported	Description: Total number of requests sent to MS to activate secondary PDP context for 3G service rejected as requested service is not supported. Triggers: Increments when the SGSN sends Activate Secondary Reject due to SGSN operator policy restrictions and the cause code was configured as Service Not Supported. Activations can be rejected due to SGSN operator policy in which the reject cause is configurable. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-sec-activ-rej-service-not-supported	Description: Total number of requests sent to MS to activate secondary PDP context for 2G service rejected as requested service is not supported. Triggers: Increments when the SGSN sends Activate Secondary Reject due to SGSN operator policy restrictions and the cause code was configured as Service Not Supported. Activations can be rejected due to SGSN operator policy in which the reject cause is configurable. Availability: per GPRS service Type: Counter	Int32

Variables	Description	Data Type
3G-sec-actv-rej-service-not-subscribed	Description: Total number of requests sent to MS to activate secondary PDP context for 3G service rejected as subscriber is not subscribed to requested service due to: - APN Selection related errors such as: - Activate PDP Request without PDP Address/Type and APN, and multiple subscription records present. - Activate PDP Request with PDP Type (and address) and no matching subscription records for the PDP Type. - Activate PDP Request with dynamic addressing but matching subscription records have static address. - Create PDP Context Response from GGSN is received with error code “Access denied, no subscription”. Triggers: Increments when the SGSN sends Activate Reject for all the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-sec-actv-rej-service-not-subscribed	Description: Total number of requests sent to MS to activate secondary PDP context for 2G service rejected as subscriber is not subscribed to requested service due to: - APN Selection related errors such as: - Activate PDP Request without PDP Address/Type and APN, and multiple subscription records present. - Activate PDP Request with PDP Type (and address) and no matching subscription records for the PDP Type. - Activate PDP Request with dynamic addressing but matching subscription records have static address. - Create PDP Context Response from GGSN is received with error code “Access denied, no subscription”. Triggers: Increments when the SGSN sends Activate Reject for all the above conditions. Availability: per GPRS service Type: Counter	Int32
3G-sec-actv-rej-svc-opt-tmp-out-of-order	Total number of requests to activate secondary PDP context for 3G service rejected as requested service option is temporarily out of order. Type: Counter	Int32
2G-sec-actv-rej-svc-opt-tmp-out-of-order	Total number of requests to activate secondary PDP context for 3G service rejected as requested service option is temporarily out of order. Type: Counter	Int32
3G-sec-actv-rej-semantically-incorrect	Total number of requests to activate secondary PDP context for 2G service rejected due to semantically incorrect message. Type: Counter	Int32
2G-sec-actv-rej-semantically-incorrect	Total number of requests to activate secondary PDP context for 3G service rejected as mandatory information in message is invalid. Type: Counter	Int32

Variables	Description	Data Type
3G-sec-actv-rej-invalid-mandatory-info	Total number of requests to activate secondary PDP context for 3G service rejected as mandatory information in message is invalid. Type: Counter	Int32
2G-sec-actv-rej-invalid-mandatory-info	Total number of requests to activate secondary PDP context for 2G service rejected as mandatory information in message is invalid. Type: Counter	Int32
3G-sec-actv-rej-msg-type-non-existent	Total number of requests to activate secondary PDP context for 3G service rejected due to non-existent type of message. Type: Counter	Int32
2G-sec-actv-rej-msg-type-non-existent	Total number of requests to activate secondary PDP context for 3G service rejected due to non-existent type of message. Type: Counter	Int32
3G-sec-actv-rej-ie-non-existent	Total number of requests to activate secondary PDP context for 3G service rejected due to non-existence of information element. Type: Counter	Int32
2G-sec-actv-rej-ie-non-existent	Total number of requests to activate secondary PDP context for 2G service rejected due to non-existence of information element. Type: Counter	Int32
3G-sec-actv-rej-conditional-ie-err	Total number of requests to activate secondary PDP context for 3G service rejected due to error in conditional information element. Type: Counter	Int32
2G-sec-actv-rej-conditional-ie-err	Total number of requests to activate secondary PDP context for 2G service rejected due to error in conditional information element. Type: Counter	Int32
3G-sec-actv-rej-msg-not-compat-prot-state	Total number of requests to activate secondary PDP context for 3G service rejected as message type is not compatible with protocol state. Type: Counter	Int32
2G-sec-actv-rej-msg-not-compat-prot-state	Total number of requests to activate secondary PDP context for 2G service rejected as message type is not compatible with protocol state. Type: Counter	Int32
3G-sec-actv-rej-recovery-on-timer-expiry	Total number of requests to activate secondary PDP context for 3G service rejected as timer expired for recovery. Type: Counter	Int32
2G-sec-actv-rej-recovery-on-timer-expiry	Total number of requests to activate secondary PDP context for 2G service rejected as timer expired for recovery. Type: Counter	Int32
3G-sec-actv-rej-prot-err-unspecified	Total number of requests to activate secondary PDP context for 3G service rejected due to unspecified protocol error. Type: Counter	Int32
2G-sec-actv-rej-prot-err-unspecified	Total number of requests to activate secondary PDP context for 2G service rejected due to unspecified protocol error. Type: Counter	Int32

Variables	Description	Data Type
2G-sec-actv-rej-llc-sndcp-fail	This statistic has been deprecated.	Int32
2G-sec-actv-rej-qos-not-acc	This statistic has been deprecated.	Int32
3G-sec-actv-rej-semantic-error-tft-operation	Total number of requests to activate secondary PDP context for 3G service rejected due to semantic error in traffic flow template (TFT) operation. Type: Counter	Int32
2G-sec-actv-rej-semantic-error-tft-operation	Total number of requests to activate secondary PDP context for 3G service rejected due to semantic error in traffic flow template (TFT) operation. Type: Counter	Int32
3G-sec-actv-rej-syntax-err-in-tft-operation	Total number of requests to activate secondary PDP context for 3G service rejected due to syntax error in traffic flow template (TFT) operation. Type: Counter	Int32
2G-sec-actv-rej-syntax-err-in-tft-operation	Total number of requests to activate secondary PDP context for 2G service rejected due to syntax error in traffic flow template (TFT) operation. Type: Counter	Int32
3G-sec-actv-rej-unknown-pdp-context	Total number of requests to activate secondary PDP context for 3G service rejected due to unknown type of PDP context. Type: Counter	Int32
2G-sec-actv-rej-unknown-pdp-context	Total number of requests to activate secondary PDP context for 2G service rejected due to unknown type of PDP context. Type: Counter	Int32
3G-sec-actv-rej-semantic-err-in-pkt-filter	Total number of requests to activate secondary PDP context for 3G service rejected due to semantic error in packet filter. Type: Counter	Int32
2G-sec-actv-rej-semantic-err-in-pkt-filter	Total number of requests to activate secondary PDP context for 3G service rejected due to semantic error in packet filter. Type: Counter	Int32
3G-sec-actv-rej-syntax-err-in-pkt-filter	Total number of requests to activate secondary PDP context for 3G service rejected due to syntax error in packet filter. Type: Counter	Int32
2G-sec-actv-rej-syntax-err-in-pkt-filter	Total number of requests to activate secondary PDP context for 2G service rejected due to syntax error in packet filter. Type: Counter	Int32
3G-sec-actv-rej-pdp-notft-actv	Total number of requests to activate secondary PDP context for 3G service rejected due to TFT was not active. Type: Counter	Int32
2G-sec-actv-rej-pdp-notft-actv	Total number of requests to activate secondary PDP context for 3G service rejected due to TFT was not active. Type: Counter	Int32

Variables	Description	Data Type
3G-total-actv-fail	Description: Total number of PDP context activation (primary and secondary) failed for 3G service due to: • GMM procedure collision • Duplicate Activate Requests in non-active states (activation or deactivation in progress) • Detach before activation is over • Handoff to Peer before activation is over • GTP Tunnel deletion in case of Second PDP Activations • IU release before the completion of activation procedure Triggers: Increments when the SGSN drops PDP Activate Request for all the above conditions. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-total-actv-fail	Description: Total number of PDP context activation (primary and secondary) failed for 2G service due to: • GMM procedure collision • Duplicate Activate Requests in non-active states (activation or deactivation in progress) • Detach before activation is over • Handoff to Peer before activation is over • GTP Tunnel deletion in case of Second PDP Activations Triggers: Increments when the SGSN drops PDP Activate Request for all the above conditions. Availability: per GPRS service Type: Counter	Int32
3G-primary-actv-fail	Total number of primary PDP context activations that failed in the 3G service. Type: Counter	Int32
2G-primary-actv-fail	Description: Total number of Primary PDP Activation Requests dropped due to: • GMM procedure collision. • Duplicate Activate Requests in non-active states (activation or deactivation in progress). • Detach before activation completes. • Handoff to peer before activation completes. Triggers: Increments when the SGSN drops the Primary PDP Activate Request for indicated condition. Availability: per GPRS service, per RA Type: Counter	Int32
3G-secondary-actv-fail	Description: Total number of secondary PDP context activations that failed in the 3G service. Type: Counter	Int32

Variables	Description	Data Type
2G-secondary-actv-fail	Description: New counter in release 9.0: Total number of Secondary PDP Activation Requests dropped due to: • GMM procedure collision. • Duplicate Activate Requests in non-active states (activation or deactivation in progress). • Detach before activation completes. • Handoff to peer before activation completes. • GTP tunnel deletion. Triggers: Increments when the SGSN drops the Secondary PDP Activate Request for indicated condition. Availability: per GPRS service, per RA Type: Counter	Int32
3G-actv-fail-iu-release-before-activate	Description: Total number of PDP Activation Requests dropped due to IU release before the completion of activation procedure. Triggers: Increments when the SGSN drops PDP Activate Request due to IU release before the completion of activation procedure. Availability: per SGSN service, per RA Type: Counter	Int32
3G-actv-fail-gaurd-timer-expiry	Description: Total number of PDP Activation Requests dropped due to SM Guard Timer Expiry. Triggers: Increments when the SGSN drops PDP Activate Request due to SM Guard Timer Expiry. Availability: per SGSN service, per RA Type: Counter	Int32
3G-actv-fail-duplicate-activation	Description: Total number of PDP Activation Requests dropped due to an ongoing PDP Activation. Triggers: Increments when the SGSN drops PDP Activate Request due to PDP Activation in progress. Availability: per SGSN service, per RA Type: Counter	Int32
3G-actv-fail-other-ongoing-procedure	Description: Total number of PDP Activation Requests dropped due to other ongoing procedures such as: • Activate Request during network initiated detach • Page timer expiry while trying to send Activate Accept/Reject Triggers: Increments when the SGSN drops PDP Activate Request due to other ongoing procedures. Availability: per SGSN service, per RA Type: Counter	Int32
3G-actv-fail-tunnel-deactivation	Description: Total number of PDP Activation Requests that fail due to tunnel deactivation. Availability: per SGSN service, per RA Type: Counter	Int32

Variables	Description	Data Type
3G-actv-fail-handoff-before-activate-over	Description: Total number of PDP Activation Request dropped due to Handoff request from Peer SGSN for the subscriber. Triggers: Increments when the SGSN drops PDP Activate Request due to Handoff request from Peer SGSN for the subscriber. Availability: per SGSN Service and per RA Type: Counter	Int32
3G-actv-fail-detach-before-activate-over	Description: Total number of PDP Activation Requests dropped due to detach request while activation was in progress. Triggers: Increments when the SGSN drops PDP Activate Request due to detach request while activation was in progress. Availability: per SGSN Service and per RA Type: Counter	Int32
3G-actv-fail-phase-2-offload	Description: This proprietary counter indicates the total number of PDP Activation failures due to Phase 2 offloading in 3G service. This statistics is specific to releases 8.1 and higher. Triggers: Increments when PDP Activation fails due to Phase 2 offloading. Availability: per SGSN service, per RA, per RNC Type: Counter	Int32
3G-actv-fail-invalid-message-content	Description: Total number of PDP Activation Requests dropped due to invalid information in activate request such as invalid Ti flag value. Triggers: Increments when the SGSN drops PDP Activate Request due to above condition. Availability: per SGSN Service and per RA Type: Counter	Int32
2G-actv-fail-gaurd-timer-expiry	Description: Total number of PDP Activation Requests dropped due to SM Guard Timer Expiry. Triggers: Increments when the SGSN drops PDP Activate Request due to SM Guard Timer Expiry. Availability: per GPRS service Type: Counter	Int32
2G-actv-fail-duplicate-activation	Description: Total number of PDP Activation Requests dropped due to an ongoing PDP Activation. Triggers: Increments when the SGSN drops PDP Activate Request due to PDP Activation in progress. Availability: per GPRS service Type: Counter	Int32
2G-actv-fail-other-ongoing-procedure	Description: Total number of PDP Activation Requests dropped due to other ongoing procedures such as: (1) Activate Request during network initiated detach. (2) Page timer expiry while trying to send Activate Accept/Reject. Triggers: Increments when the SGSN drops PDP Activate Request due to other ongoing procedures Availability: per GPRS service Type: Counter	Int32
2G-actv-fail-tunnel-deactivation	Description: Total number of PDP Activation Requests that fail due to tunnel deactivation. Availability: per GPRS Service and per NSEI Type: Counter	Int32

Variables	Description	Data Type
2G-actv-fail-handoff-before-activate-over	Description: Total number of PDP Activation Requests dropped due to Handoff request from Peer SGSN for the subscriber. Triggers: Increments when the SGSN drops PDP Activate Request due to Handoff request from Peer SGSN for the subscriber. Availability: per GPRS service Type: Counter	Int32
2G-actv-fail-detach-before-activate-over	Description: Total number of PDP Activation Requests dropped due to detach request while activation was in progress. Triggers: Increments when the SGSN drops PDP Activate Request due to detach request while activation was in progress. SGSN for the subscriber. Availability: per GPRS service Type: Counter	Int32
2G-actv-fail-phase-2-offload	Description: This proprietary counter indicates the total number of PDP Activation failures due to Phase 2 offloading in 2G service. This statistics is specific to releases 8.1 and higher. Triggers: Increments when PDP Activation fails due to Phase 2 offloading. Availability: per GPRS service, per RA Type: Counter	Int32
2G-actv-fail-invalid-msg-content	Description: Total number of PDP Activation Requests dropped due to invalid information in activate request such as invalid Ti flag value Triggers: Increments when the SGSN drops PDP Activate Request due to above condition Availability: per GPRS service Type: Counter	Int32
3G-dupl-ti-pdpactive	Description: Total number of duplicate context activation requests for 3G service with duplicate transaction identifiers (TIs). Type: Counter	Int32
2G-dupl-ti-pdpactive	Description: Total number of duplicate context activation requests for 2G service with duplicate transaction identifiers (TIs). Type: Counter	Int32
3G-dupl-nsapi-pdpactv	Description: Total number of duplicate context activation requests for 3G service with duplicate Network Service Access Point Identifier (NSAPI). Type: Counter	Int32
2G-dupl-nsapi-pdpactv	Description: Total number of duplicate context activation requests for 2G service with duplicate Network Service Access Point Identifier (NSAPI). Type: Counter	Int32
3G-dupl-pdpaddr-apn-pdpactv	Description: Total number of duplicate context activation requests for 3G service with duplicate PDP address or APN name. Type: Counter	Int32
2G-dupl-pdpaddr-apn-pdpactv	Description: Total number of duplicate context activation requests for 2G service with duplicate PDP address or APN name. Type: Counter	Int32
3G-dupl-ti-n-pdpactive	Description: Total number of duplicate context activation requests for 3G service which are not in PDP active state with duplicate transaction identifiers (TIs). Type: Counter	Int32

Variables	Description	Data Type
2G-dupl-ti-n-pdpactiv	Description: Total number of duplicate context activation requests for 2G service which are not in PDP active state with duplicate transaction identifiers (TIs). Type: Counter	Int32
3G-dupl-nsapi-n-pdpactiv	Description: Total number of duplicate context activation requests for 3G service which are not in PDP active state with duplicate Network Service Access Point Identifier (NSAPI). Type: Counter	Int32
2G-dupl-nsapi-n-pdpactiv	Description: Total number of duplicate context activation requests for 2G service which are not in PDP active state with duplicate Network Service Access Point Identifier (NSAPI). Type: Counter	Int32
3G-dupl-pdpaddr-apn-n-pdpactiv	Description: Total number of duplicate context activation requests for 3G service which are not in PDP active state with duplicate PDP address and access point name. Type: Counter	Int32
2G-dupl-pdpaddr-apn-n-pdpactiv	Description: Total number of duplicate context activation requests for 2G service which are not in PDP active state with duplicate PDP address and access point name. Type: Counter	Int32
3G-ms-modify-req	Description: Total number of MS initiated PDP context modification requests received for 3G service. Type: Counter	Int32
2G-ms-modify-req	Description: Total number of MS initiated PDP context modification requests received for 2G service. Type: Counter	Int32
3G-ms-modify-accept	Description: Total number of MS initiated PDP context modification requests accepted for 3G service. Type: Counter	Int32
2G-ms-modify-accept	Description: Total number of MS initiated PDP context modification requests accepted for 2G service. Type: Counter	Int32
3G-ms-modify-rej	Description: Total number of MS initiated PDP context modification requests rejected for 3G service. Type: Counter	Int32
2G-ms-modify-rej	Description: Total number of MS initiated PDP context modification requests rejected for 2G service. Type: Counter	Int32
3G-nw-modify-req	Description: Total number of network initiated PDP context modification requests received for 3G service. Type: Counter	Int32
2G-nw-modify-req	Description: Total number of network initiated PDP context modification requests received for 2G service. Type: Counter	Int32
3G-nw-ret-modify-req	Description: Total number of retransmitted network initiated PDP context modification requests received for 3G service. Type: Counter	Int32

Variables	Description	Data Type
2G-nw-ret-modify-req	Description: Total number of retransmitted network initiated PDP context modification requests received for 2G service. Type: Counter	Int32
3G-nw-modify-accept	Description: Total number of network initiated PDP context modification requests accepted for 3G service. Type: Counter	Int32
2G-nw-modify-accept	Description: Total number of network initiated PDP context modification requests accepted for 2G service. Type: Counter	Int32
3G-nw-modify-rej	Description: Total number of network initiated PDP context modification requests rejected for 3G service. Type: Counter	Int32
2G-nw-modify-rej	Description: Total number of network initiated PDP context modification requests rejected for 2G service. Type: Counter	Int32
3G-ms-modify-rej-insufficient-resources	Description: Total number of MS initiated modify PDP context requests for 3G service rejected due to insufficient resources. Type: Counter	Int32
2G-ms-modify-rej-insufficient-resources	Description: Total number of MS initiated modify PDP context requests for 2G service rejected due to insufficient resources. Type: Counter	Int32
3G-ms-modify-rej-service-opt-not-supported	Description: Total number of MS initiated modify PDP context requests for 3G service rejected as requested service option is not supported. Type: Counter	Int32
2G-ms-modify-rej-service-opt-not-supported	Description: Total number of MS initiated modify PDP context requests for 2G service rejected as requested service option is not supported. Type: Counter	Int32
3G-ms-modify-rej-semantic-err-tft-operation	Description: Total number of MS initiated modify PDP context requests for 3G service rejected due to semantic error in subscriber traffic flow template processing. Type: Counter	Int32
2G-ms-modify-rej-semantic-err-tft-operation	Description: Total number of MS initiated modify PDP context requests for 2G service rejected due to semantic error in subscriber traffic flow template processing. Type: Counter	Int32
3G-ms-modify-rej-syntax-err-tft-operation	Description: Total number of MS initiated modify PDP context requests for 3G service rejected due to syntax error in subscriber traffic flow template operation. Type: Counter	Int32
2G-ms-modify-rej-syntax-err-tft-operation	Description: Total number of MS initiated modify PDP context requests for 2G service rejected due to syntax error in subscriber traffic flow template operation. Type: Counter	Int32
3G-ms-modify-rej-semantic-err-pkt-filter	Description: Total number of MS initiated modify PDP context requests for 3G service rejected due to semantic error in packet filter. Type: Counter	Int32

Variables	Description	Data Type
2G-ms-modify-rej-semnatic-err-pkt-filter	Description: Total number of MS initiated modify PDP context requests for 2G service rejected due to semantic error in packet filter. Type: Counter	Int32
3G-ms-modify-rej-syntax-err-pkt-filter	Description: Total number of MS initiated modify PDP context requests for 3G service rejected due to syntax error in packet filter. Type: Counter	Int32
2G-ms-modify-rej-syntax-err-pkt-filter	Description: Total number of MS initiated modify PDP context requests for 2G service rejected due to syntax error in packet filter. Type: Counter	Int32
3G-ms-modify-rej-semnatic-incorrect-message	Description: Total number of MS initiated modify PDP context requests for 3G service rejected due to semantically incorrect message. Type: Counter	Int32
2G-ms-modify-rej-semnatic-incorrect-message	Description: Total number of MS initiated modify PDP context requests for 2G service rejected due to semantically incorrect message. Type: Counter	Int32
3G-ms-modify-rej-invalid-mand-info	Description: Total number of MS initiated modify PDP context requests for 3G service rejected as mandatory information in message is invalid. Type: Counter	Int32
2G-ms-modify-rej-invalid-mand-info	Description: Total number of MS initiated modify PDP context requests for 2G service rejected as mandatory information in message is invalid. Type: Counter	Int32
3G-ms-modify-rej-msg-non-existent	Description: Total number of MS initiated requests to modify PDP context for 3G service rejected due to non-existent type of message. Type: Counter	Int32
2G-ms-modify-rej-msg-non-existent	Description: Total number of MS initiated requests to modify PDP context for 2G service rejected due to non-existent type of message. Type: Counter	Int32
3G-ms-modify-rej-ie-non-existent	Description: Total number of MS initiated modify PDP context requests for 3G service rejected due to non-existence of information element. Type: Counter	Int32
2G-ms-modify-rej-ie-non-existent	Description: Total number of MS initiated modify PDP context requests for 2G service rejected due to non-existence of information element. Type: Counter	Int32
3G-ms-modify-rej-conditional-ie-err	Description: Total number of MS initiated modify PDP context requests for 3G service rejected due to error in conditional information element. Type: Counter	Int32
2G-ms-modify-rej-conditional-ie-err	Description: Total number of MS initiated modify PDP context requests for 2G service rejected due to error in conditional information element. Type: Counter	Int32
3G-ms-modify-rej-msg-not-compatible-prot-state	Description: Total number of MS initiated modify PDP context requests for 3G service rejected as message is not compatible with protocol state. Type: Counter	Int32

Variables	Description	Data Type
2G-ms-modify-rej-msg-not-compatible-prot-state	Description: Total number of MS initiated modify PDP context requests for 2G service rejected as message is not compatible with protocol state. Type: Counter	Int32
3G-ms-modify-rej-rcvry-on-tmr-expiry	Total number of MS initiated modify PDP context requests for 3G service rejected as timer expired for recovery. Type: Counter	Int32
2G-ms-modify-rej-rcvry-on-tmr-expiry	Description: Total number of MS initiated modify PDP context requests for 2G service rejected as timer expired for recovery. Type: Counter	Int32
3G-ms-modify-rej-prot-err-unspec	Description: Total number of MS initiated modify PDP context requests for 3G service rejected due to unspecified protocol error. Type: Counter	Int32
2G-ms-modify-rej-prot-err-unspec	Description: Total number of MS initiated modify PDP context requests for 2G service rejected due to unspecified protocol error. Type: Counter	Int32
3G-modify-rej-insufficient-resources	Description: Total number of requests to modify PDP context for 3G service rejected due to insufficient resources. Type: Counter	Int32
2G-modify-rej-insufficient-resources	Description: Total number of requests to modify PDP context for 2G service rejected due to insufficient resources. Type: Counter	Int32
3G-modify-rej-service-opt-not-supported	Description: Total number of requests to modify PDP context for 3G service rejected as requested service option is not supported. Type: Counter	Int32
2G-modify-rej-service-opt-not-supported	Description: Total number of requests to modify PDP context for 2G service rejected as requested service option is not supported. Type: Counter	Int32
3G-modify-rej-semantic-err-tft-operation	Description: Total number of requests to modify PDP context for 3G service rejected due to semantic error in subscriber traffic flow template processing. Type: Counter	Int32
2G-modify-rej-semantic-err-tft-operation	Description: Total number of requests to modify PDP context for 2G service rejected due to semantic error in subscriber traffic flow template processing. Type: Counter	Int32
3G-modify-rej-syntax-err-tft-operation	Description: Total number of requests to modify PDP context for 3G service rejected due to syntax error in subscriber traffic flow template operation. Type: Counter	Int32
2G-modify-rej-syntax-err-tft-operation	Description: Total number of requests to modify PDP context for 2G service rejected due to syntax error in subscriber traffic flow template operation. Type: Counter	Int32
3G-modify-rej-semantic-err-pkt-filter	Description: Total number of requests to modify PDP context for 3G service rejected due to semantic error in packet filter. Type: Counter	Int32

Variables	Description	Data Type
2G-modify-rej-semnatic-err-pkt-filter	Description: Total number of requests to modify PDP context for 2G service rejected due to semantic error in packet filter. Type: Counter	Int32
3G-modify-rej-syntax-err-pkt-filter	Description: Total number of requests to modify PDP context for 3G service rejected due to syntax error in packet filter. Type: Counter	Int32
2G-modify-rej-syntax-err-pkt-filter	Description: Total number of requests to modify PDP context for 2G service rejected due to syntax error in packet filter. Type: Counter	Int32
3G-modify-rej-semnatic-incorrect-message	Description: Total number of requests to modify PDP context for 3G service rejected due to semantically incorrect message. Type: Counter	Int32
2G-modify-rej-semnatic-incorrect-message	Description: Total number of requests to modify PDP context for 2G service rejected due to semantically incorrect message. Type: Counter	Int32
3G-modify-rej-invalid-mand-info	Description: Total number of requests to modify PDP context for 3G service rejected as mandatory information in message is invalid. Type: Counter	Int32
2G-modify-rej-invalid-mand-info	Description: Total number of requests to modify PDP context for 2G service rejected as mandatory information in message is invalid. Type: Counter	Int32
3G-modify-rej-msg-non-existent	Description: Total number of MS initiated requests to modify PDP context for 3G service rejected due to non-existent type of message. Type: Counter	Int32
2G-modify-rej-msg-non-existent	Description: Total number of MS initiated requests to modify PDP context for 2G service rejected due to non-existent type of message. Type: Counter	Int32
3G-modify-rej-ie-non-existent	Description: Total number of requests to modify PDP context for 3G service rejected due to non-existence of information element. Type: Counter	Int32
2G-modify-rej-ie-non-existent	Description: Total number of requests to modify PDP context for 2G service rejected due to non-existence of information element. Type: Counter	Int32
3G-modify-rej-conditional-ie-err	Description: Total number of requests to modify PDP context for 3G service rejected due to error in conditional information element. Type: Counter	Int32
2G-modify-rej-conditional-ie-err	Description: Total number of requests to modify PDP context for 2G service rejected due to error in conditional information element. Type: Counter	Int32
3G-modify-rej-msg-not-compatible-prot-state	Description: Total number of requests to modify PDP context for 3G service rejected as message is not compatible with protocol state. Type: Counter	Int32

Variables	Description	Data Type
2G-modify-rej-msg-not-compatible-prot-state	Description: Total number of requests to modify PDP context for 2G service rejected as message is not compatible with protocol state. Type: Counter	Int32
3G-modify-rej-rcvry-on-tmr-expiry	Description: Total number of requests to modify PDP context for 3G service rejected as timer expired for recovery. Type: Counter	Int32
2G-modify-rej-rcvry-on-tmr-expiry	Description: Total number of requests to modify PDP context for 2G service rejected as timer expired for recovery. Type: Counter	Int32
3G-modify-rej-prot-err-unspec	Description: Total number of requests to modify PDP context for 3G service rejected due to unspecified protocol error. Type: Counter	Int32
2G-modify-rej-prot-err-unspec	Description: Total number of requests to modify PDP context for 2G service rejected due to unspecified protocol error. Type: Counter	Int32
3G-ms-deactiv-req	Description: Total number of MS initiated PDP context deactivation requests received for 3G service. Type: Counter	Int32
2G-ms-deactiv-req	Description: Total number of MS initiated PDP context deactivation requests received for 2G service. Type: Counter	Int32
3G-ms-deactiv-accept	Description: Total number of MS initiated PDP context deactivation requests sent to MS accepted for 3G service. Triggers: Increments when the SGSN sends Deactivate Accept in response to MS initiated PDP deactivation. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-ms-deactiv-accept	Description: Total number of MS initiated PDP context deactivation requests sent to MS accepted for 2G service. Triggers: Increments when the SGSN sends Deactivate Accept in response to MS initiated PDP deactivation. Availability: per GPRS service Type: Counter	Int32
3G-ms-deactiv-reject	Description: Total number of MS initiated PDP context deactivation requests rejected for 3G service. Type: Counter	Int32
2G-ms-deactiv-reject	Description: Total number of MS initiated PDP context deactivation requests rejected for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-odb	Description: Total number of MS initiated PDP context deactivation requests rejected for 3G service due to operator determined barring. Type: Counter	Int32

Variables	Description	Data Type
2G-ms-deactiv-rej-rx-odb	Description: Total number of MS initiated PDP context deactivation requests rejected for 2G service due to operator determined barring. Type: Counter	Int32
3G-ms-deactiv-rej-rx-mbms-cap-insuff-res	Description: Total number of MS initiated PDP context deactivation requests rejected for 3G service due to insufficient resources for Multimedia Broadcast/Multicast Service (MBMS) capability. Type: Counter	Int32
2G-ms-deactiv-rej-rx-mbms-cap-insuff-res	Description: Total number of MS initiated PDP context deactivation requests rejected for 2G service due to insufficient resources for Multimedia Broadcast/Multicast Service (MBMS) capability. Type: Counter	Int32
3G-ms-deactiv-rej-rx-llc-sndcp-fail-gb	Description: Total number of MS initiated PDP context deactivation requests rejected for 3G service due to failure at the logical link control with sub network dependent convergence protocol at Gb interface. Type: Counter	Int32
2G-ms-deactiv-rej-rx-llc-sndcp-fail-gb	Description: Total number of MS initiated PDP context deactivation requests rejected for 2G service due to failure at the logical link control with sub network dependent convergence protocol at Gb interface. Type: Counter	Int32
3G-ms-deactiv-rej-rx-insuff-res	Description: Total number of MS initiated PDP context deactivation requests rejected due to insufficient resources in download direction for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-insuff-res	Description: Total number of MS initiated PDP context deactivation requests rejected due to insufficient resources in download direction for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-miss-unkwn-apn	Description: Total number of MS initiated PDP context deactivation requests rejected due to missing or unknown APN for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-miss-unkwn-apn	Description: Total number of MS initiated PDP context deactivation requests rejected due to missing or unknown APN for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-unkwn-pdp-addr	Description: Total number of MS initiated PDP context deactivation requests rejected due to unknown PDP context name or address for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-unkwn-pdp-addr	Description: Total number of MS initiated PDP context deactivation requests rejected due to unknown PDP context name or address for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-usr-auth-fail	Description: Total number of MS initiated PDP context deactivation requests rejected as user authentication failed for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-usr-auth-fail	Description: Total number of MS initiated PDP context deactivation requests rejected as user authentication failed for 2G service. Type: Counter	Int32

Variables	Description	Data Type
3G-ms-deactiv-rej-rx-activ-rej-ggsn	Description: Total number of MS initiated PDP context deactivation requests rejected as request rejected by corresponding GGSN for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-activ-rej-ggsn	Description: Total number of MS initiated PDP context deactivation requests rejected as request rejected by corresponding GGSN for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-activ-rej-unspec	Description: Total number of MS initiated PDP context deactivation requests rejected due to unknown or unspecified reasons for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-activ-rej-unspec	Description: Total number of MS initiated PDP context deactivation requests rejected due to unknown or unspecified reasons for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-service-opt-no-support	Description: Total number of MS initiated PDP context deactivation requests rejected as requested service option is not supported for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-service-opt-no-support	Description: Total number of MS initiated PDP context deactivation requests rejected as requested service option is not supported for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-service-opt-no-sub	Description: Total number of MS initiated PDP context deactivation requests rejected as subscriber is not subscribed requested service option for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-service-opt-no-sub	Description: Total number of MS initiated PDP context deactivation requests rejected as subscriber is not subscribed requested service option for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-svc-opt-temp-out-order	Description: Total number of MS initiated PDP context deactivation requests rejected as requested service option is temporarily out of order for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-svc-opt-temp-out-order	Description: Total number of MS initiated PDP context deactivation requests rejected as requested service option is temporarily out of order for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-nsapi-already-used	Description: Total number of MS initiated PDP context deactivation requests rejected as requested NSAPI is already in use for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-nsapi-already-used	Description: Total number of MS initiated PDP context deactivation requests rejected as requested NSAPI is already in use for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-reg-deactiv	Description: Total number of MS initiated PDP context deactivation requests rejected due to registration of deactivate message for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-reg-deactiv	Description: Total number of MS initiated PDP context deactivation requests rejected due to registration of deactivate message for 2G service. Type: Counter	Int32

Variables	Description	Data Type
3G-ms-deactiv-rej-rx-qos-not-acc	Description: Total number of MS initiated PDP context deactivation requests rejected as requested QoS is not accepted for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-qos-not-acc	Description: Total number of MS initiated PDP context deactivation requests rejected as requested QoS is not accepted for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-nwt-fail	Description: Total number of MS initiated PDP context deactivation requests rejected due to network failure for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-nwt-fail	Description: Total number of MS initiated PDP context deactivation requests rejected due to network failure for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-reactivation-req	Description: Total number of MS initiated PDP context deactivation requests rejected due re-activation request arrived before completion of deactivation procedure for 3G service. Type: Counter	Int32
2G-ms-deactiv-rej-rx-reactivation-req	Description: Total number of MS initiated PDP context deactivation requests rejected due re-activation request arrived before completion of deactivation procedure for 2G service. Type: Counter	Int32
3G-ms-deactiv-rej-rx-no-feature-support	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as requested feature is not supported. Type: Counter	Int32
2G-ms-deactiv-rej-rx-no-feature-support	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as requested feature is not supported. Type: Counter	Int32
3G-ms-deactiv-rej-rx-sem-err-tft-op	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to semantic error in subscriber TFT option. Type: Counter	Int32
2G-ms-deactiv-rej-rx-sem-err-tft-op	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to semantic error in subscriber TFT option. Type: Counter	Int32
3G-ms-deactiv-rej-rx-syn-err-tft-op	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to syntax error in subscriber TFT option. Type: Counter	Int32
2G-ms-deactiv-rej-rx-syn-err-tft-op	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to syntax error in subscriber TFT option. Type: Counter	Int32
3G-ms-deactiv-rej-rx-unknown-ctx	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to unknown context in request. Type: Counter	Int32
2G-ms-deactiv-rej-rx-unknown-ctx	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to unknown context in request. Type: Counter	Int32

Variables	Description	Data Type
3G-ms-deactiv-rej-rx-ctx-no-tft-already-actv	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as no TFT is active in this context. Type: Counter	Int32
2G-ms-deactiv-rej-rx-ctx-no-tft-already-actv	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as no TFT is active in this context. Type: Counter	Int32
3G-ms-deactiv-rej-rx-mcast-grp-mem-tout	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as multicast group memory is timed-out. Type: Counter	Int32
2G-ms-deactiv-rej-rx-mcast-grp-mem-tout	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as multicast group memory is timed-out. Type: Counter	Int32
3G-ms-deactiv-rej-rx-sem-err-pkt-filter	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to semantic error in packet filter. Type: Counter	Int32
2G-ms-deactiv-rej-rx-sem-err-pkt-filter	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to semantic error in packet filter. Type: Counter	Int32
3G-ms-deactiv-rej-rx-syn-err-pkt-filter	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to syntax error in packet filter. Type: Counter	Int32
2G-ms-deactiv-rej-rx-syn-err-pkt-filter	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to syntax error in packet filter. Type: Counter	Int32
3G-ms-deactiv-rej-rx-invalid-trans-id	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to invalid transaction id. Type: Counter	Int32
2G-ms-deactiv-rej-rx-invalid-trans-id	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to invalid transaction id. Type: Counter	Int32
3G-ms-deactiv-rej-rx-sem-incorrect-msg	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to semantically incorrect message. Type: Counter	Int32
2G-ms-deactiv-rej-rx-sem-incorrect-msg	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to semantically incorrect message. Type: Counter	Int32
3G-ms-deactiv-rej-rx-inval-mand-info	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as mandatory information in message is invalid. Type: Counter	Int32
2G-ms-deactiv-rej-rx-inval-mand-info	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as mandatory information in message is invalid. Type: Counter	Int32

Variables	Description	Data Type
3G-ms-deactiv-rej-rx-msg-non-existent	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to non-existent type of message. Type: Counter	Int32
2G-ms-deactiv-rej-rx-msg-non-existent	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to non-existent type of message. Type: Counter	Int32
3G-ms-deactiv-rej-rx-ie-non-existent	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to non-existence of information element. Type: Counter	Int32
2G-ms-deactiv-rej-rx-ie-non-existent	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to non-existence of information element. Type: Counter	Int32
3G-ms-deactiv-rej-rx-cond-ie-err	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to error in conditional information element. Type: Counter	Int32
2G-ms-deactiv-rej-rx-cond-ie-err	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to error in conditional information element. Type: Counter	Int32
3G-ms-deactiv-rej-rx-prot-err-unspec	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to unspecified protocol error. Type: Counter	Int32
2G-ms-deactiv-rej-rx-prot-err-unspec	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to unspecified protocol error. Type: Counter	Int32
3G-ms-deactiv-rej-rx-apn-rest-incomap-actv-pdp	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to incompatible APN for PDP context activation. Type: Counter	Int32
2G-ms-deactiv-rej-rx-apn-rest-incomap-actv-pdp	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to incompatible APN for PDP context activation. Type: Counter	Int32
3G-ms-deactiv-rej-rx-msg-not-compat-prot-state	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as message is not compatible with protocol state. Type: Counter	Int32
2G-ms-deactiv-rej-rx-msg-not-compat-prot-state	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as message is not compatible with protocol state. Type: Counter	Int32
3G-ms-deactiv-rej-rx-rcvry-on-tmr-expiry	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as timer expired for recovery. Type: Counter	Int32
2G-ms-deactiv-rej-rx-rcvry-on-tmr-expiry	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as timer expired for recovery. Type: Counter	Int32

Variables	Description	Data Type
3G-sgsn-init-deact-req	Description: Number of SGSN initiated PDP context deactivation requests received for 3G service. Type: Gauge.	Int32
2G-sgsn-init-deact-req	Description: Number of SGSN initiated PDP context deactivation requests received for 2G service. Type: Counter	Int32
3G-sgsn-init-deact-acc	Description: Total number of SGSN initiated PDP context deactivation requests received from MS accepted for 3G service. Triggers: Increments when the SGSN receives Deactivate Accept corresponding to SGSN initiated Deactivation Request sent to MS. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-sgsn-init-deact-acc	Description: Total number of SGSN initiated PDP context deactivation requests received from MS accepted for 2G service. Triggers: Increments when the SGSN receives Deactivate Accept corresponding to SGSN initiated Deactivation Request sent to MS. Availability: per GPRS service Type: Counter	Int32
3G-sgsn-init-deact-rej	Description: Total number of SGSN initiated PDP context deactivation requests rejected for 3G service. Type: Counter	Int32
2G-sgsn-init-deact-rej	Description: Total number of SGSN initiated PDP context deactivation requests rejected for 2G service. Type: Counter	Int32
3G-ggsn-init-deact-req	Description: Total number of GGSN initiated PDP context deactivation requests received for 3G service. Type: Counter	Int32
2G-ggsn-init-deact-req	Description: Total number of GGSN initiated PDP context deactivation requests received for 2G service. Type: Counter	Int32
3G-ggsn-init-deact-acc	Description: Total number of GGSN initiated PDP context deactivation requests received from MS accepted for 3G service. Triggers: Increments when the SGSN receives Deactivate Accept corresponding to GGSN initiated Deactivation Request sent to MS. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-ggsn-init-deact-acc	Description: Total number of GGSN initiated PDP context deactivation requests received from MS accepted for 2G service. Triggers: Increments when the SGSN receives Deactivate Accept corresponding to GGSN initiated Deactivation Request sent to MS. Availability: per GPRS service Type: Counter	Int32
3G-ggsn-init-deact-rej	Description: Total number of GGSN initiated PDP context deactivation requests rejected for 3G service. Type: Counter	Int32

Variables	Description	Data Type
2G-ggsn-init-deact-rej	Description: Total number of GGSN initiated PDP context deactivation requests rejected for 2G service. Type: Counter	Int32
3G-hlr-init-deact-req	Description: Total number of HLR initiated PDP context deactivation requests received for 3G service. Type: Counter	Int32
2G-hlr-init-deact-req	Description: Total number of HLR initiated PDP context deactivation requests received for 2G service. Type: Counter	Int32
3G-hlr-init-deact-acc	Description: Total number of HLR initiated PDP context deactivation requests received from MS accepted for 3G service. Triggers: Increments when the SGSN receives Deactivate Accept corresponding to HLR initiated Deactivation Request sent to MS. Availability: per SGSN service, per RAI Type: Counter	Int32
2G-hlr-init-deact-acc	Description: Total number of HLR initiated PDP context deactivation requests received from MS accepted for 2G service. Triggers: Increments when the SGSN receives Deactivate Accept corresponding to HLR initiated Deactivation Request sent to MS. Availability: per GPRS service Type: Counter	Int32
3G-hlr-init-deact-rej	Description: Total number of HLR initiated PDP context deactivation requests rejected for 3G service. Type: Counter	Int32
2G-hlr-init-deact-rej	Description: Total number of HLR initiated PDP context deactivation requests rejected for 2G service. Type: Counter.	Int32
3G-nw-deactv-rej-tx-odb	Description: Total number of MS initiated PDP context deactivation requests rejected for 3G service due to operator determined barring. Type: Counter.	Int32
2G-nw-deactv-rej-tx-odb	Description: Total number of MS initiated PDP context deactivation requests rejected for 2G service due to operator determined barring. Type: Counter.	Int32
3G-nw-deactv-rej-tx-mbms-cap-insuff-res	Description: Total number of MS initiated PDP context deactivation requests rejected for 3G service due to insufficient resources for Multimedia Broadcast/Multicast Service (MBMS) capability. Type: Counter.	Int32
2G-nw-deactv-rej-tx-mbms-cap-insuff-res	Description: Total number of MS initiated PDP context deactivation requests rejected for 2G service due to insufficient resources for Multimedia Broadcast/Multicast Service (MBMS) capability. Type: Counter.	Int32

Variables	Description	Data Type
3G-nw-deactiv-rej-tx-llc-sndcp-fail-gb	Description: Total number of MS initiated PDP context deactivation requests rejected for 3G service due to failure at the logical link control with sub network dependent convergence protocol at Gb interface. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-llc-sndcp-fail-gb	Description: Total number of MS initiated PDP context deactivation requests rejected for 2G service due to failure at the logical link control with sub network dependent convergence protocol at Gb interface. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-insuff-res	Description: Total number of MS initiated PDP context deactivation requests rejected due to insufficient resources in download direction for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-insuff-res	Description: Total number of MS initiated PDP context deactivation requests rejected due to insufficient resources in download direction for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-miss-unkwn-apn	Description: Total number of MS initiated PDP context deactivation requests rejected due to missing or unknown APN for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-miss-unkwn-apn	Description: Total number of MS initiated PDP context deactivation requests rejected due to missing or unknown APN for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-unkwn-pdp-addr	Description: Total number of MS initiated PDP context deactivation requests rejected due to unknown PDP context name or address for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-unkwn-pdp-addr	Description: Total number of MS initiated PDP context deactivation requests rejected due to unknown PDP context name or address for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-usr-auth-fail	Description: Total number of MS initiated PDP context deactivation requests rejected as user authentication failed for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-usr-auth-fail	Description: Total number of MS initiated PDP context deactivation requests rejected as user authentication failed for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-actv-rej-ggsn	Description: Total number of MS initiated PDP context deactivation requests rejected as request rejected by corresponding GGSN for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-actv-rej-ggsn	Description: Total number of MS initiated PDP context deactivation requests rejected as request rejected by corresponding GGSN for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-actv-rej-unspec	Description: Total number of MS initiated PDP context deactivation requests rejected due to unknown or unspecified reasons for 3G service. Type: Counter.	Int32

Variables	Description	Data Type
2G-nw-deactiv-rej-tx-actv-rej-unspec	Description: Total number of MS initiated PDP context deactivation requests rejected due to unknown or unspecified reasons for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-service-opt-no-support	Description: Total number of MS initiated PDP context deactivation requests rejected as requested service option is not supported for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-service-opt-no-support	Description: Total number of MS initiated PDP context deactivation requests rejected as requested service option is not supported for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-service-opt-no-subs	Description: Total number of MS initiated PDP context deactivation requests rejected as subscriber is not subscribed requested service option for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-service-opt-no-subs	Description: Total number of MS initiated PDP context deactivation requests rejected as subscriber is not subscribed requested service option for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-svc-opt-temp-out-order	Description: Total number of MS initiated PDP context deactivation requests rejected as requested service option is temporarily out of order for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-svc-opt-temp-out-order	Description: Total number of MS initiated PDP context deactivation requests rejected as requested service option is temporarily out of order for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-nsapi-already-used	Description: Total number of MS initiated PDP context deactivation requests rejected as requested NSAPI is already in use for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-nsapi-already-used	Description: Total number of MS initiated PDP context deactivation requests rejected as requested NSAPI is already in use for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-reg-deactiv	Description: Total number of MS initiated PDP context deactivation requests rejected due to registration of deactivate message for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-reg-deactiv	Description: Total number of MS initiated PDP context deactivation requests rejected due to registration of deactivate message for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-qos-not-acc	Description: Total number of MS initiated PDP context deactivation requests rejected as requested QoS is not accepted for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-qos-not-acc	Description: Total number of MS initiated PDP context deactivation requests rejected as requested QoS is not accepted for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-nwt-fail	Description: Total number of MS initiated PDP context deactivation requests rejected due to network failure for 3G service. Type: Counter.	Int32

Variables	Description	Data Type
2G-nw-deactiv-rej-tx-nwt-fail	Description: Total number of MS initiated PDP context deactivation requests rejected due to network failure for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-reactivation-req	Total number of MS initiated PDP context deactivation requests rejected due re-activation request arrived before completion of deactivation procedure for 3G service. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-reactivation-req	Total number of MS initiated PDP context deactivation requests rejected due re-activation request arrived before completion of deactivation procedure for 2G service. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-no-feature-support	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as requested feature is not supported. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-no-feature-support	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as requested feature is not supported. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-sem-err-tft-op	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to semantic error in subscriber TFT option. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-sem-err-tft-op	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to semantic error in subscriber TFT option. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-syn-err-tft-op	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to syntax error in subscriber TFT option. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-syn-err-tft-op	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to syntax error in subscriber TFT option. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-unknown-ctx	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to unknown context in request. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-unknown-ctx	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to unknown context in request. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-ctx-no-tft-already-actv	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as no TFT is active in this context. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-ctx-no-tft-already-actv	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as no TFT is active in this context. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-mcast-grp-mem-tout	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as multicast group memory is timed-out. Type: Counter.	Int32

Variables	Description	Data Type
2G-nw-deactiv-rej-tx-mcast-grp-mem-tout	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as multicast group memory is timed-out. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-sem-err-pkt-filter	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to semantic error in packet filter. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-sem-err-pkt-filter	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to semantic error in packet filter. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-syn-err-pkt-filter	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to syntax error in packet filter. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-syn-err-pkt-filter	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to syntax error in packet filter. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-invalid-trans-id	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to invalid transaction id. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-invalid-trans-id	Total number of MS initiated PDP context deactivation requests for 2G service rejected due to invalid transaction id. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-sem-incorrect-msg	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to semantically incorrect message. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-sem-incorrect-msg	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to semantically incorrect message. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-inval-mand-info	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as mandatory information in message is invalid. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-inval-mand-info	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as mandatory information in message is invalid. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-msg-non-existent	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to non-existent type of message. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-msg-non-existent	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to non-existent type of message. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-ie-non-existent	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to non-existence of information element. Type: Counter.	Int32

■ Common Syntax Options

Variables	Description	Data Type
2G-nw-deactiv-rej-tx-ie-non-existent	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to non-existence of information element. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-cond-ie-err	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to error in conditional information element. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-cond-ie-err	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to error in conditional information element. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-prot-err-unspec	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to unspecified protocol error. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-prot-err-unspec	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to unspecified protocol error. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-apn-rest-incomap-actv-pdp	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected due to incompatible APN for PDP context activation. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-apn-rest-incomap-actv-pdp	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected due to incompatible APN for PDP context activation. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-msg-not-compat-prot-state	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as message is not compatible with protocol state. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-msg-not-compat-prot-state	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as message is not compatible with protocol state. Type: Counter.	Int32
3G-nw-deactiv-rej-tx-rcvry-on-tmr-expiry	Description: Total number of MS initiated PDP context deactivation requests for 3G service rejected as timer expired for recovery. Type: Counter.	Int32
2G-nw-deactiv-rej-tx-rcvry-on-tmr-expiry	Description: Total number of MS initiated PDP context deactivation requests for 2G service rejected as timer expired for recovery. Type: Counter.	Int32
2G-total-sm-status-req-rx	Description: Total number of session management (SM) status request messages received for 2G service. Type: Counter.	Int32
3G-total-sm-status-req-tx	Description: Total number of session management (SM) status request messages sent for 3G service. Type: Counter.	Int32
2G-total-sm-status-req-tx	Description: Total number of session management (SM) status request messages sent for 2G service. Type: Counter.	Int32

Variables	Description	Data Type
RNC-rab-modify-req	Description: Total number of Radio Network Controller (RNC) initiated radio access bearer (RAB) modify requests received at the SGSN. Type: Counter.	Int32
RNC-rab-rel-req	Description: Total number of RNC initiated RAB release requests received at the SGSN. Type: Counter.	Int32
RNC-rab-modify-num	Description: Total number of RNC initiated RAB modified messages received. Type: Counter.	Int32
RNC-rab-rel-num	Description: Total number of RNC initiated RAB release requests handled at SGSN. Type: Counter.	Int32
rab-assign-req	Description: Total number of SGSN initiated RAB assignment requests sent to all RNCs. Type: Counter.	Int32
rab-assign-rsp	Description: Total number of SGSN initiated RAB assignment response received from all RNCs. Type: Counter.	Int32
rab-assign-rej	Description: This statistic has been deprecated.	Int32
rab-setup-reattempt	Description: Total number of radio access bearer (RAB) setup reattempted. Type: Counter.	Int32
rab-set/mod-req	Description: Total number of SGSN initiated RAB setup or modify requests sent to all RNCs. Type: Counter.	Int32
rab-set/mod-acc	Description: Total number of SGSN initiated RAB setup or modify accept messages received from all RNCs. Type: Counter.	Int32
rab-set/mod-tmr-expired	Description: Total events when RAB setup/modify timer expired. Type: Counter.	Int32
rab-set/mod-fail	Description: Total events when RAB setup/modify procedure failed Type: Counter.	Int32
rab-rel-req	Description: Total number of SGSN initiated RAB release request messages sent to all RNCs. Type: Counter.	Int32
rab-rel-accept	Description: Total number of SGSN initiated RAB release accept messages received from all RNCs. Type: Counter.	Int32
rab-rel-tmr-expired	Description: Total events when RAB release timer expired. Type: Counter.	Int32
rab-rel-fail	Description: Total radio access bearer release requests failed Type: Counter.	Int32
rab-queued	Description: Total radio access bearer requests queued for transmission. Type: Counter.	Int32
rab-rel-pre-empt	Description: Total number of RAB released due to pre-empted event. Type: Counter.	Int32

Variables	Description	Data Type
rab-rel-utran	Description: Total number of RAB released due to initiation from UTRAN. Type: Counter.	Int32
rab-rel-ue-radio-lost	Description: Total number of RAB released due to UE radio connection lost. Type: Counter.	Int32
total-rab-rej	Total RAB setup/modify/release requests rejected. Type: Counter.	Int32
rab-rej-rab-preempt	Description: Total number of RAB requests rejected due to pre-empted event. Triggers: Increments when RNC initiated RAB release procedure sends RAB Release request with this cause. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-overall-tmr-exp	Description: Total number of RAB requests for relocation rejected due to expiry of timer TRELOCoverall. This specifies the maximum time for the protection of overall Relocation procedure in the source RNC. Triggers: Increments when the source RNC initiates the Iu Release Request procedure towards the SGSN with a cause value "TRELOCoverall expiry". Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-prep-tmr-exp	Description: Total number of RAB requests for relocation rejected due to expiry of timer TRELOCprep. This specifies the maximum time for expiry of Relocation Preparation procedure in the source RNC. Triggers: Increments when the source RNC cancels the Relocation Preparation procedure by initiating the Relocation Cancel procedure with a cause value "TRELOCprep expiry". Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-complete-tmr-exp	Description: Indicates the maximum time for waiting the relocation completion in the CN. Triggers: Increments when the SGSN initiate release of Iu connections towards the source and the target RNC initiates the Iu Release procedure with a cause value "TRELOCcomplete expiry". Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-queuing-tmr-exp	Description: Indicates the maximum time in the RNC for queuing the request of RAB establishment or modification. Triggers: Increments when the RNC sends the RAB assignment response to report unsuccessful establishment/modification of RAB with the failed RAB ID list with the cause "Tqueuing Expiry". Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-triggered	Description: Total number of RAB requests for relocation triggered. The action fails due to relocation of MS to another RNC. Triggers: Increments when the Relocation required message is sent with the cause "Relocation Triggered" to the SGSN. If the relocation becomes necessary during the RAB Assignment procedure, the RNC may interrupt the ongoing RAB Assignment procedure and initiate the Relocation Preparation procedure and send the RAB assignment response as failure cause "relocation required". Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-unable-to-est-reloc	Description: Total number of RAB requests rejected because RAB failed to establish during relocation as it cannot be supported in the target RNC or the RAB did not exist in the source RNC. Triggers: Increments when the target RNC sends the RELOCATION REQUEST ACKNOWLEDGE message with a value in Cause IE “Unable to Establish During Relocation”, for the RABs rejected and received in RELOCATION REQUEST from SGSN, only if the Relocation Type IE is set to “UE involved in relocation of SRNS” in the request. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-unknown-target-rnc	Description: Total number of RAB requests rejected due to unknown target RNC in request. Triggers: Increments when the SGSN rejects the relocation of SRNS by sending a RELOCATION PREPARATION FAILURE message to the source RNC with Cause IE set to “Unknown target RNC”, if the target RNC is unknown to SGSN. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-cancel	Description: Total number of RAB requests rejected as relocation was cancelled due to interaction with other procedures. Triggers: Increments when SGSN issues the IU release command to RNC with the cause “Relocation Cancelled”, if the Relocation Preparation procedure is unsuccessfully terminated. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-success	Description: Total number of RAB requests rejected due to completion of successful relocation. Triggers: Increments when SGSN issues the IU release command to RNC with the cause “Successful Relocation”, if completion of successful relocation of SRNS happened. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-cypher-algo-no-support	Description: Total number of RAB requests rejected as the UTRAN or the UE is unable to support the requested ciphering and/or integrity protection algorithms. Triggers: If the target RNC cannot support any of the integrity protection (ciphering respectively) alternatives provided in the Integrity Protection Information IE or Encryption Information IE, in RELOCATION REQUEST from SGSN, it returns a RELOCATION FAILURE message with the cause “Requested Ciphering and/or Integrity Protection algorithms not supported”. RNC also sends the SECURITY MODE REJECT with the same cause for the same reason when receiving the SECURITY MODE COMMAND from SGSN. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-conflict-cypher-info	Description: Total number of RAB requests rejected due to conflict with the requested security mode configuration and the already existing security mode configuration. Triggers: If the target RNC receives a source RNC to target RNC Transparent Container IE containing Chosen Integrity Protection (Encryption respectively) Algorithm IE without Integrity Protection (Ciphering respectively) Key IE, it returns a RELOCATION FAILURE message with the cause “Conflict with already existing Integrity protection and/or Ciphering information”. RNC also sends the SECURITY MODE REJECT with the same cause for the same reason when receiving the SECURITY MODE COMMAND from SGSN. Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-failure-radio-if-proc	Description: Total number of RAB requests rejected due to failure in radio interface procedure. Triggers: If the radio interface Security Mode Control procedure fails, a SECURITY MODE REJECT message will be sent to the SGSN with cause value “Failure in the Radio Interface Procedure” from RNC. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-rel-utran-reason	Description: Total number of RAB requests rejected as RAB release is initiated due to UTRAN generated reason. Triggers: Increments when RNC initiated RAB release procedure sends RAB Release request with this cause. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-utran-inactivity	Description: Total number of RAB requests rejected as RAB released due to user inactivity at UTRAN on one or more non real time RABs in order to optimize radio resource. Triggers: Increments when the source RNC initiates the Iu Release Request procedure towards the SGSN with a cause value “User Inactivity” for a particular MS. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-time-crit-relocation	Description: Total number of RAB requests rejected as relocation is requested for time critical reason. This cause value is reserved to represent all critical cases where the connection is likely to be dropped if relocation is not performed. Triggers: Increments when the source RNC initiates relocation preparation procedure by sending a RELOCATION REQUIRED message with the cause “Time Critical Relocation”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-req-traffic-class-unavail	Description: Total number of RAB request rejected as requested traffic class unavailable. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Requested Traffic Class not Available”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-invalid-rab-param-val	Description: Total number of RAB requests rejected due to invalid RAB parameter value. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Invalid RAB Parameters Value”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-req-max-bit-rate-unavail	Description: Total number of RAB requests rejected as requested maximum bit rate is unavailable. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Requested Maximum Bit Rate not Available”. Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-req-max-bit-rate-dl-unavail	Description: Total number of RAB requests rejected as requested maximum bit rate for downlink is unavailable. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Requested Maximum Bit Rate for DL not Available”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-req-max-bit-rate-ul-unavail	Description: Total number of RAB requests rejected as requested maximum bit rate for uplink is unavailable. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Requested Maximum Bit Rate for UL not Available”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-req-gbr-unavail	Description: Total number of RAB requests rejected as requested guaranteed bit rate is unavailable. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID with the cause “Requested Guaranteed Bit Rate not Available”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-req-gbr-dl-unavail	Description: Total number of RAB requests rejected as requested guaranteed bit rate for downlink is unavailable. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Requested Guaranteed Bit Rate for DL not Available”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-req-gbr-ul-unavail	Description: Total number of RAB requests rejected as requested guaranteed bit rate for uplink is unavailable. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Requested Guaranteed Bit Rate for UL not Available”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-req-trans-delay-not-achievable	Description: Total number of RAB requests rejected as requested transfer delay is not achievable. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Requested Transfer Delay not Achievable”. Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-inal-rab-param-combo	Description: Total number of RAB requests rejected due to invalid RAB parameter combination. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Invalid RAB Parameters Combination”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-violation-for-sdu-param	Description: Total number of RAB requests rejected due to occurrence of condition violation for Service Data Unit (SDU) parameters. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Condition Violation for SDU Parameters”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-violation-traffic-handle-prio	Description: Total number of RAB requests rejected due to occurrence of condition violation for traffic handling priority. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Condition Violation for Traffic Handling Priority”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-violation-for-gbr	Description: Total number of RAB request rejected due to occurrence of condition violation for guaranteed bitrate. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Condition Violation for Guaranteed Bit Rate”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-usr-plane-ver-unsupported	Description: Total number of RAB requests rejected as requested user plane version is not supported. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “User Plane Versions not Supported”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-iu-up-failure	Description: Total number of RAB requests rejected due to Iu UP activation failure. Triggers: Increments when RNC sends the RAB assignment response to report unsuccessful establishment/modification of a RAB with the failed RAB ID list with the cause “Iu UP Failure”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-alloc-expiry	Description: Total number of RAB requests rejected as Relocation Resource Allocation procedure failed due to expiry of the TRELOCalloc timer. Triggers: Increments when SGSN is unable to complete the relocation of SRNS before the TRELOCalloc expiry. The SGSN then issues a RELOCATION PREPARATION FAILURE message to the source RNC with the cause “TRELOCalloc expiry”. Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-reloc-failure-target-system	Description: Total number of RAB request rejected due to relocation failure in target CN/RNC or target system. Triggers: Increments when SGSN cannot complete the relocation of SRNS due to failure in the Target CN/RNC or Target System. The SGSN then issues a RELOCATION PREPARATION FAILURE message to the source RNC with the cause “Relocation Failure in Target CN/RNC or Target System”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-invalid-rdb-id	Description: Total number of RAB requests rejected due to invalid RAB ID in the RNC. Triggers: If the RAB ID of a RAB requested to be released is unknown in the RNC, RNC will report as a RAB failed to release with the cause value “Invalid RAB ID” in RAB Assignment Response to SGSN. If RAB ID of RAB requested to be transferred is unknown in RNC, the SRNS CONTEXT RESPONSE message will contain the cause with the RAB ID. The RAB ID IE for each RAB for which UTRAN is not able to transfer a data volume report due to unknown RAB ID is included in the DATA VOLUME REPORT message together with a Cause IE “Invalid RAB ID”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-no-remaining-rab	Description: Total number of RAB requests rejected as no RAB is available. Triggers: Increments when SGSN issues the IU release command to RNC with the cause “No remaining RAB”, if there is no RAB associated with the IU. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-interaction-with-other-proc	Description: Total number of RAB requests rejected as relocation was cancelled due to interaction with other procedure. Triggers: If source RNC triggers the RELOCATION CANCEL to SGSN with cause “Interaction with other procedure” when relocation preparation is triggered and it receives another message via the same signalling IU. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-integrity-check-fail	Description: Total number of RAB requests rejected due to repeated failure in integrity checking. Triggers: Increments when RNC issues the IU release request to SGSN with the cause “Repeated Integrity Checking Failure”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-req-type-not-supported	Description: Total number of RAB requests rejected as the RNC is not supporting the requested location request type either because it does not support the requested event or it does not support the requested report area. Triggers: If the RNC cannot deliver the location information as requested by the SGSN, due to non-support of the requested event, then it will send location report message indicating the UE location to be “Undetermined” with cause “Requested Request Type not supported”. Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-req-superseeded	Description: Total number of RAB requests rejected due to a second request on the same RAB. Triggers: In case of a request to modify or release a RAB that contains the RAB ID of a RAB being queued, the RAB will be taken out of the queue and treated according to the second request. The first request will be responded to as RAB failed to setup or modify the cause value “Request superseded” by RNC to SGSN in RAB Assignment Response. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-rel-due-to-ue-sig-con-rel	Description: Total number of RAB requests rejected as RAB released due to UE generated signaling connection release. Triggers: Increments when RNC issues the IU release request to SGSN with the cause “Release due to UE generated signalling connection release”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-res-optimization-reloc	Description: Total number of RAB requests rejected as resource optimization for relocation occurred. Triggers: Increments when the source RNC initiates relocation preparation procedure by sending a RELOCATION REQUIRED message with the cause “Resource Optimization Relocation”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-req-info-unavail	Description: Total number of RAB requests rejected as requested information is unavailable. Triggers: Increments when the source RNC initiates relocation preparation procedure by sending a RELOCATION REQUIRED message with the cause “Resource Optimization Relocation”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-due-to-radio-reason	Description: Total number of RAB requests rejected due to radio related errors/causes. Triggers: Increments when the source RNC initiates relocation preparation procedure by sending a RELOCATION REQUIRED message with the cause “Relocation desirable for radio reasons”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-unsupported-target-system	Description: Total number of RAB requests rejected as relocation is not supported in target system. Triggers: Increments when SGSN is unable to complete the relocation of SRNS due to failure in the Target CN/RNC or Target System. The SGSN then issues a RELOCATION PREPARATION FAILURE message to the source RNC with the cause “Relocation not supported in Target RNC or Target system”. Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-directed-retry	Description: Total number of RAB requests rejected as retries directed by system. Triggers: Directed retry is the process of assigning a User Equipment to a radio resource that does not belong to the serving RNC, for example, in situations of congestion. It is triggered by the RAB Assignment procedure and employs relocation procedures. The RNC may indicate an impending directed retry attempt to GSM by sending a RAB ASSIGNMENT RESPONSE message with a RAB ID included in the list of RABs failed to setup and a cause value of “Directed Retry”. The RNC invokes relocation by sending a RELOCATION REQUIRED message to the active SGSN node with the cause “Directed Retry”. The source RNC initiates relocation preparation procedure by sending a RELOCATION REQUIRED message with the cause “Time Critical Relocation”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-radio-con-with-ue-lost	Description: Total number of RAB requests rejected as radio connection with UE is lost. Triggers: Increments when RNC initiated RAB release procedure sends RAB Release request with this cause. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-rnc-unable-to-estab-all-rfcs	Description: Total number of RAB requests rejected as RNC is unable to establish all RAB subflow combinations indicated within the RAB Parameters IE. Triggers: Increments when the RNC cannot initialise the requested user plane mode for any of the user plane mode versions in the UP Mode Versions IE according to the rules for initialization of the respective user plane mode versions. The RAB Assignment Response (failure) with the cause value “RNC unable to establish all RFCs” will be received from RNC. It will be received for the same reason in RELOCATION REQUEST ACKNOWLEDGE message from RNC. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-deciphering-keys-unavail	Description: Total number of RAB requests rejected as RNC is unable to provide the requested deciphering keys. Triggers: Increments when the RNC is unable to provide the requested deciphering keys. The RNC will then send a LOCATION RELATED DATA FAILURE message including the Cause IE to the SGSN with the cause “Deciphering Keys Not Available”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-dedicated-assistance-data-unavail	Description: Total number of RAB requests rejected as RNC is unable to successfully deliver the requested dedicated assistance data to the UE. Triggers: Increments when the RNC is unable to successfully deliver the requested dedicated assistance data to the UE. The RNC will then send a LOCATION RELATED DATA FAILURE message including the Cause IE to the SGSN with the cause “Dedicated Assistance data Not Available”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reloc-target-not-allowed	Description: Total number of RAB requests rejected as relocation to the indicated target cell is not allowed for the UE. Triggers: Increments when SGSN is unable to complete the relocation of SRNS if the Relocation is not allowed in Target Cell. The SGSN then issues a RELOCATION PREPARATION FAILURE message to the source RNC with the cause “Relocation Target not allowed”. Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-location-reporting-congestion	Description: Total number of RAB requests rejected due to an inability to support location reporting caused by overload. Triggers: Increments when the RNC cannot deliver the location information as requested by the SGSN due to non-availability of requested information. It will then send location report message indicating the UE location to be “Undetermined” with cause “Location Reporting Congestion”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-reduce-load-in-serving-cell	Description: Total number of RAB requests rejected as the load reduction on serving cell needs to be reduced. Triggers: Increments when the source RNC initiates relocation preparation procedure by sending a RELOCATION REQUIRED message with the cause “Reduce Load in Serving Cell”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-no-radio-res-avail-in-target-cell	Description: Total number of RAB requests rejected as radio resource is unavailable in target cell. Triggers: Increments when SGSN is unable to complete the relocation of SRNS if the Resource is not available in Target Cell. The SGSN then issues a RELOCATION PREPARATION FAILURE message to the source RNC with the cause “No Radio Resources Available in Target Cell”. Target RNC will send RELOCATION FAILURE message to SGSN with the cause “Radio Resources Available in Target Cell”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-geran-iu-mode-failure	Description: Total number of RAB requests rejected due to failure in Iu mode in GERAN. The RAB establishment/modification/relocation failed because the GERAN BSC cannot provide an appropriate RAB due to limited capabilities within GERAN. Triggers: Increments when the RAB establishment/modification/relocation fails because the GERAN BSC cannot provide an appropriate RAB due to limited capabilities within GERAN. The RNC will then send RAB assignment response with the cause “GERAN Iu-mode failure”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-access-restrict-shared-nwtk	Description: Total number of RAB requests rejected as access is restricted in the cell due to shared network. Triggers: Increments when the source RNC initiates the Iu Release Request procedure towards the SGSN with a cause value “Access Restricted Due to Shared Networks”. The source RNC initiates relocation preparation procedure by sending a RELOCATION REQUIRED message with the cause “Access Restricted Due to Shared Networks”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-incoming-reloc-nwt-support-puesbine	Description: Total number of RAB requests rejected as the incoming relocation request is not accepted by the target RNC because of the Provision of UE Specific Behavior Information to Network Entities (PUESBINE) feature. Triggers: Increments when the target RNC cannot support the relocation due to PUESBINE feature. It sends a RELOCATION FAILURE message with the cause “Incoming Relocation Not Supported Due To PUESBINE Feature” To SGSN. Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-traffic-target-more-source-cell	Description: Total number of RAB requests rejected as the traffic load in the target cell is higher than that in the source cell. Triggers: Increments when SGSN is unable to complete the relocation of SRNS if the Resource is not available in Target Cell. The SGSN will then issue a RELOCATION PREPARATION FAILURE message to the source RNC with the cause “Traffic Load In The Target Cell Higher Than In The Source Cell”. Target RNC sends RELOCATION FAILURE message to SGSN with the cause “Traffic Load In The Target Cell Higher Than In The Source Cell” to SGSN when load at the target cell is higher than that in the source cell. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-mbms-no-multicat-svc-for-ue	Description: Total number of RAB requests rejected for Multimedia Broadcast/Multicast Service (MBMS) feature as multicast service is not supported by user equipment. Triggers: Increments when SGSN is unable to process the UPLINK INFORMATION EXCHANGE REQUEST for reason that MS does not have the multicat service. The SGSN then sends the UPLINK INFORMATION EXCHANGE FAILURE message to the RNC about the reason for unsuccessful operation with a cause value “MBMS - No Multicast Service For This UE”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-mbms-unknown-ue-id	Description: Total number of RAB requests rejected for MBMS feature because the user equipment identification is unknown to the CN. Triggers: Increments when SGSN is unable to process the UPLINK INFORMATION EXCHANGE REQUEST for reason that UE is unknown to SGSN. The SGSN then sends the UPLINK INFORMATION EXCHANGE FAILURE message to the RNC about the reason for unsuccessful operation with a cause value “MBMS - Unknown UE ID”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-mbms-sess-start-no-data-bearer	Description: Total number of RAB requests rejected for MBMS feature as the session starts without any necessary data bearer. Triggers: Increments when the RNC decides to wait to establish the MBMS RAB. It then sends the MBMS SESSION START RESPONSE message with the cause value “Successful MBMS Session Start - No Data Bearer Necessary” to SGSN for MBMS SESSION START REQUEST. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-mbms-superseed-nnsf	Description: Total number of RAB requests rejected for MBMS feature as request superseded due to NAS Node Selection Function (NNSF). Triggers: Increments when NNSF is active and the RNC is received from several CN nodes for a certain MBMS Bearer Service. The MBMS SESSION START message is also sent by the SGSN, and the RNC informs the SGSN with MBMS SESSION START FAILURE message and cause value “MBMS - Superseded Due To NNSF”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-mbms-ue-linking-already-done	Description: Total number of RAB requests rejected for MBMS feature as user equipment is already linked to the given Multicast service. Triggers: Increments when the RNC sends the MBMS UE LINKING RESPONSE message for unsuccessful linking(s) with cause value “MBMS - UE Linking Already Done”. Availability: per SGSN service, per RAI Type: Counter.	Int32

Variables	Description	Data Type
rab-rej-mbms-ue-delinking-failure	Description: Total number of RAB requests rejected for MBMS feature as user equipment delinking failed because the UE had not been linked to the given Multicast service. Triggers: Increments when the RNC sends the MBMS UE LINKING RESPONSE message for unsuccessful de-linking(s) with cause value “MBMS - UE De-Linking Failure - No Existing UE Linking”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-tmgi-unknown	Description: Total number of RAB requests rejected as the indicated Temporary Mobile Group Identifier (TMGI) is unknown. Triggers: Increments when the MBMS REGISTRATION FAILURE message sent from SGSN informs the RNC about the reason for unsuccessful MBMS registration operation with cause value “TMGI Unknown”. Availability: per SGSN service, per RAI Type: Counter.	Int32
rab-rej-ms-unspecified-failure	Description: Total number of RAB requests rejected due to unspecified failure at MS. Triggers: Availability: per SGSN service, per RAI Type: Counter.	Int32
SRNS-ctxt-req-sent	Description: Total number of Serving Radio Network Subsystem (SRNS) context request sent. Type: Counter.	Int32
SRNS-ctxt-rsp-rcvd	Description: Total number of SRNS context request received. Type: Counter.	Int32
SRNS-ctxt-req-tmr-expired	Description: Total number of events when SRNS context request timer expired. Type: Counter.	Int32
SRNS-ctxt-total-pdp-acc	Description: Total number of PDP context request by SRNS accepted. Type: Counter.	Int32
SRNS-ctxt-total-pdp-rej	Description: Total number of PDP context request by SRNS rejected. Type: Counter.	Int32
SRNS-data-fwd-cmd-sent	Description: Total number of data forward command sent by SRNS. Type: Counter.	Int32
sms-ctx-deny-rab-preempt	Description: Total number of PDP context request by SRNS denied due to RAB preempted procedure. Type: Counter.	Int32
sms-ctx-deny-reloc-overall-tmr-exp	Description: Total number of PDP context request by SRNS denied due to overall timer expired for relocation. Type: Counter.	Int32
sms-ctx-deny-reloc-prep-tmr-exp	Description: Total number of PDP context request by SRNS denied due to relocation preparation timer expired. Type: Counter.	Int32
sms-ctx-deny-reloc-complete-tmr-exp	Description: Total number of PDP context request by SRNS denied due to relocation complete timer expired. Type: Counter.	Int32

Variables	Description	Data Type
sms-ctx-deny-queuing-tmr-exp	Description: Total number of PDP context request by SRNS denied due to relocation queuing timer expired. Type: Counter.	Int32
sms-ctx-deny-reloc-triggered	Description: Total number of PDP context request by SRNS denied due to relocation triggered. Type: Counter.	Int32
sms-ctx-deny-unable-to-est-reloc	Description: Total number of PDP context request by SRNS denied due to unable to establish relocation. Type: Counter.	Int32
sms-ctx-deny-unknown-target-rnc	Description: Total number of PDP context request by SRNS denied due to unknown target RNC. Type: Counter.	Int32
sms-ctx-deny-reloc-cancel	Description: Total number of PDP context request by SRNS denied due to relocation cancelled. Type: Counter.	Int32
sms-ctx-deny-reloc-success	Description: Total number of PDP context request by SRNS denied due to successful relocation. Type: Counter.	Int32
sms-ctx-deny-cypher-algo-no-support	Description: Total number of PDP context request by SRNS denied as requested ciphering algorithm not supported. Type: Counter.	Int32
sms-ctx-deny-conflict-cypher-info	Description: Total number of PDP context request by SRNS denied due to conflict with existing ciphering information. Type: Counter.	Int32
sms-ctx-deny-failure-radio-if-proc	Description: Total number of PDP context request by SRNS denied due to failure in radio interface procedure. Type: Counter.	Int32
sms-ctx-deny-rel-utran-reason	Description: Total number of PDP context request by SRNS denied as release occurred due to UTRAN generated reason. Type: Counter.	Int32
sms-ctx-deny-utran-inactivity	Description: Total number of PDP context request by SRNS denied due to inactivity at UTRAN. Type: Counter.	Int32
sms-ctx-deny-time-crit-relocation	Description: Total number of PDP context request by SRNS denied due to time critical relocation. Type: Counter.	Int32
sms-ctx-deny-req-traffic-class-unavail	Description: Total number of PDP context request by SRNS denied as requested traffic class unavailable. Type: Counter.	Int32
sms-ctx-deny-invalid-rab-param-val	Description: Total number of PDP context request by SRNS denied due invalid RAB parameter value. Type: Counter.	Int32
sms-ctx-deny-req-max-bit-rate-unavail	Description: Total number of PDP context request by SRNS denied as requested maximum bit rate unavailable. Type: Counter.	Int32

Variables	Description	Data Type
sms-ctx-deny-req-max-bit-rate-dl-unavail	Description: Total number of PDP context request by SRNS denied as requested maximum bit rate for downlink unavailable. Type: Counter.	Int32
sms-ctx-deny-req-max-bit-rate-ul-unavail	Description: Total number of PDP context request by SRNS denied as requested maximum bit rate for uplink unavailable. Type: Counter.	Int32
sms-ctx-deny-req-gbr-unavail	Description: Total number of PDP context request by SRNS denied as requested guaranteed bit rate unavailable. Type: Counter.	Int32
sms-ctx-deny-req-gbr-dl-unavail	Description: Total number of PDP context request by SRNS denied as requested guaranteed bit rate for downlink unavailable. Type: Counter.	Int32
sms-ctx-deny-req-gbr-ul-unavail	Description: Total number of PDP context request by SRNS denied as requested guaranteed bit rate for uplink unavailable. Type: Counter.	Int32
sms-ctx-deny-req-trans-delay-not-achieve	Description: Total number of PDP context request by SRNS denied as requested transfer delay is not achievable. Type: Counter.	Int32
sms-ctx-deny-invalid-rab-param-combo	Total number of PDP context request by SRNS denied as invalid RAB parameter combination. Type: Counter.	Int32
sms-ctx-deny-violation-for-sdu-param	Description: Total number of PDP context request by SRNS denied as violation for service data unit (SDU) parameters occurred. Type: Counter.	Int32
sms-ctx-deny-violation-traffic-handlde-prio	Description: Total number of PDP context request by SRNS denied as violation for traffic handling priority occurred. Type: Counter.	Int32
sms-ctx-deny-violation-for-gbr	Description: Total number of PDP context request by SRNS denied as violation for guaranteed bit rate occurred. Type: Counter.	Int32
sms-ctx-deny-usr-plane-ver-unsupported	Description: Total number of PDP context request by SRNS denied as user plane version not supported. Type: Counter.	Int32
sms-ctx-deny-ip-up-failure	Description: Total number of PDP context request by SRNS denied as lu activation failure occurred. Type: Counter.	Int32
sms-ctx-deny-reloc-alloc-expiry	Description: Total number of PDP context request by SRNS denied as allocation timer expired for RAB relocation. Type: Counter.	Int32
sms-ctx-deny-reloc-failure-target-system	Description: Total number of PDP context request by SRNS denied due to relocation failure in target system. Type: Counter.	Int32

Variables	Description	Data Type
sms-ctx-deny-invalid-rdb-id	Description: Total number of PDP context request by SRNS denied due to invalid RAB id in message. Type: Counter.	Int32
sms-ctx-deny-no-remaining-rab	Description: Total number of PDP context request by SRNS denied as no RAB available. Type: Counter.	Int32
sms-ctx-deny-interaction-with-other-proc	Description: Total number of PDP context request by SRNS denied due to interaction with other procedure occurred. Type: Counter.	Int32
sms-ctx-deny-integrity-check-fail	Description: Total number of PDP context request by SRNS denied as repeated integrity check failed. Type: Counter.	Int32
sms-ctx-deny-req-type-not-supported	Description: Total number of PDP context request by SRNS denied as request type not supported. Type: Counter.	Int32
sms-ctx-deny-req-superseded	Description: Total number of PDP context request by SRNS denied as request superseded by new request. Type: Counter.	Int32
sms-ctx-deny-rel-due-to-ue-sig-con-rel	Description: Total number of PDP context request by SRNS denied as RAB released due to UE generated signaling connection release. Type: Counter.	Int32
sms-ctx-deny-res-optimization-reloc	Description: Total number of PDP context request by SRNS denied as resource optimization for relocation occurred. Type: Counter.	Int32
sms-ctx-deny-req-info-unavail	Description: Total number of PDP context request by SRNS denied as requested information unavailable. Type: Counter.	Int32
sms-ctx-deny-reloc-due-to-radio-reason	Description: Total number of PDP context request by SRNS denied due to radio related errors/causes. Type: Counter.	Int32
sms-ctx-deny-reloc-unsupported-target-sys	Description: Total number of PDP context request by SRNS denied as relocation not supported in target system. Type: Counter.	Int32
sms-ctx-deny-directed-retry	Description: Total number of PDP context request by SRNS denied as retries directed by system. Type: Counter.	Int32
sms-ctx-deny-radio-con-with-ue-lost	Description: Total number of PDP context request by SRNS denied as radio connection with UE lost. Type: Counter.	Int32
sms-ctx-deny-rnc-unable-to-estab-all-rfcs	Description: Total number of PDP context request by SRNS denied as RNCs unable to establish all radio frequency communications. Type: Counter.	Int32

Variables	Description	Data Type
sms-ctx-deny-deciphering-keys-unavail	Description: Total number of PDP context request by SRNS denied as deciphering keys not available for procedure. Type: Counter.	Int32
sms-ctx-deny-dedicated-assist-data-unavail	Description: Total number of PDP context request by SRNS denied as dedicated assistance data not available for procedure. Type: Counter.	Int32
sms-ctx-deny-reloc-target-not-allowed	Description: Total number of PDP context request by SRNS denied as relocation is not allowed on target system. Type: Counter.	Int32
sms-ctx-deny-location-reporting-congestion	Description: Total number of PDP context request by SRNS denied as congestion reported in specific location. Type: Counter.	Int32
sms-ctx-deny-reduce-load-in-serving-cell	Description: Total number of PDP context request by SRNS denied as load reduction occurred in serving cell. Type: Counter.	Int32
sms-ctx-deny-no-radio-res-avail-target-cell	Description: Total number of PDP context request by SRNS denied as no radio resource available in target cell. Type: Counter.	Int32
sms-ctx-deny-geran-iu-mode-failure	Description: Total number of PDP context request by SRNS denied due to failure in Iu mode in GERAN. Type: Counter.	Int32
sms-ctx-deny-access-restrict-shared-nwtk	Description: Total number of PDP context request by SRNS denied as access restricted in shared network. Type: Counter.	Int32
sms-ctx-deny-in-reloc-nwt-support-puesbine	Description: Total number of PDP context request by SRNS denied as incoming relocation request is not supported in network due to Provision of UE Specific Behavior Information to Network Entities (PUESBINE) feature. Type: Counter.	Int32
sms-ctx-deny-traffic-target-more-src-cell	Description: Total number of PDP context request by SRNS denied as traffic in target cell is higher than the source cell. Type: Counter.	Int32
sms-ctx-deny-mbms-no-multicat-svc-for-ue	Description: Total number of SRNS context request for Multimedia Broadcast/Multicast Service (MBMS) feature denied as multicast service is not supported by user equipment. Type: Counter.	Int32
sms-ctx-deny-mbms-unknown-ue-id	Description: Total number of SRNS context request for MBMS feature denied due to user equipment identification is unknown. Type: Counter.	Int32
sms-ctx-deny-mbms-sess-start-no-data-bearer	Description: Total number of SRNS context request for MBMS feature denied as session start without any necessary data bearer. Type: Counter.	Int32
sms-ctx-deny-mbms-superseed-nnsf	Description: Total number of SRNS context request for MBMS feature denied as request superseded due to NAS node selection function (NNSF). Type: Counter.	Int32

Variables	Description	Data Type
sms-ctx-deny-mbms-ue-linking-already-done	Description: Total number of SRNS context request for MBMS feature denied as user equipment is already linked. Type: Counter.	Int32
sms-ctx-deny-mbms-ue-delinking-failure	Description: Total number of SRNS context request for MBMS feature denied as user equipment delinking failed due to any reason. Type: Counter.	Int32
sms-ctx-deny-tmgi-unknown	Description: Total number of SRNS context request denied as temporary mobile group identifier is unknown. Type: Counter.	Int32
sms-ctx-deny-ms-unspecified-failure	Description: Total number of SRNS context request denied due to unspecified failure at MS. Type: Counter.	Int32
sms-ctx-deny-no-response-from-mc	Description: Total number of SRNS context request denied due to no response from RNC. Type: Counter.	Int32
map-open-req-tx	Description: Total number of mobile application part (MAP) open requests sent. Availability: per MAP service Type: Counter.	Int32
map-open-req-rx	Description: Total number of mobile application part (MAP) open requests received. Availability: per MAP service Type: Counter.	Int32
map-open-rsp-tx	Description: Total number of MAP open response sent. Availability: per MAP service Type: Counter.	Int32
map-open-rsp-rx	Description: Total number of MAP open response received. Availability: per MAP service Type: Counter.	Int32
map-close-tx	Description: Total number of MAP close response sent. Availability: per MAP service Type: Counter.	Int32
map-close-rx	Description: Total number of MAP close response received. Availability: per MAP service Type: Counter.	Int32
map-abort-tx	Description: Total number of MAP abort request sent. Availability: per MAP service Type: Counter.	Int32
map-abort-rx	Description: Total number of MAP abort request received. Availability: per MAP service Type: Counter.	Int32
map-auth-req-tx	Description: Total number of Send Authentication Request messages transmitted to HLR. Triggers: Counter increments when a MAP Send Authentication Request is initiated from SGSN. Availability: per MAP service Type: Counter.	Int32

Variables	Description	Data Type
map-auth-succes	Description: Total number of MAP authentication successful. Availability: per MAP service Type: Counter.	Int32
map-auth-fail	Description: Total number of User Error / Provider Error received in response to SAI request. Triggers: Counter increments when User Error / Provider Error is received from HLR. Availability: per MAP service Type: Counter.	Int32
map-auth-timeouts-rcvd	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments when there is no response from the HLR for map-auth-fail-rep-req-tx message initiated from SGSN. Availability: per MAP service Type: Counter.	Int32
map-imei-req-tx	Description: Total number of MAP Check IMEI requests initiated towards EIR. Triggers: Counter increments when MAP CHECK IMEI Request is sent. Availability: per MAP service Type: Counter.	Int32
map-imei-succes	Description: Total number of successful responses for MAP Check IMEI requests. Triggers: Counter increments when MAP CHECK IMEI Request is sent. Availability: per MAP service Type: Counter.	Int32
map-imei-fail	Description: Total number of failure responses for MAP Check IMEI requests received from EIR. Triggers: Counter increments when MAP Return Error / Provider Error is received in response. Availability: per MAP service Type: Counter.	Int32
map-imei-timeout	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments when there is no response from HLR. Availability: per MAP service Type: Counter.	Int32
map-gprs-update-loc-req-tx	Description: Total number of UGL (GPRS Update Location) request initiated towards HLR. Triggers: Counter increments when UGL request is sent to HLR. Availability: per MAP service Type: Counter.	Int32
map-gprs-update-loc-rsp-tx	Description: Total number of successful response messages sent in response to UGL request. Triggers: Counter increments when successful response is received from the HLR. Availability: per MAP service Type: Counter.	Int32
map-gprs-update-loc-err-tx	Description: Total number of Failure response (User Error/Provider Error) messages received in response to UGL request. Triggers: Counter increments when MAP Return Error / Provider Error is received to UGL request. Availability: per MAP service Type: Counter.	Int32

Variables	Description	Data Type
map-gprs-update-loc-timeouts-rx	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments if there is no response from HLR. Availability: per MAP service Type: Counter.	Int32
map-cancel-loc-req-rx	Description: Total number of Cancel Location Request received from HLR. Triggers: Counter increments when MAP Cancel Location Request is received. Availability: per MAP service Type: Counter.	Int32
map-cancel-loc-rsp-tx	Description: Total number of successful Cancel Location Response messages sent to HLR. Triggers: Counter increments when successful response is sent to HLR. Availability: per MAP service Type: Counter.	Int32
map-cancel-loc-err-tx	Description: Total number of Error response messages sent to HLR. Triggers: Counter increments when MAP Return Error is sent to HLR. Availability: per MAP service Type: Counter.	Int32
map-del-subscription-req-rx	Description: Total number of Delete Subscription Data Request received from HLR. Triggers: Counter increments when MAP Delete Subscription Data (DSD) message is received. Availability: per MAP service Type: Counter.	Int32
map-del-subscription-rsp-tx	Description: Total number of successful responses for Delete Subscription Data request sent to HLR. Triggers: Counter increments when MAP Delete Subscription Data (DSD) message is received. Availability: per MAP service Type: Counter.	Int32
map-del-subscription-ret-tx	Description: Total number of Error responses sent for Delete Subscription Data (DSD) request received. Triggers: Counter increments when failure response is sent to HLR. Availability: per MAP service Type: Counter.	Int32
map-insert-subscription-revd	Description: Total number of insert subscriber data requests received by MAP. Availability: per MAP service Type: Counter.	Int32
map-standalone-isd-revd	Description: Total number of standalone insert subscriber data requests received by MAP. Availability: per MAP service Type: Counter.	Int32
map-isd-rsp-tx	Description: Total number of insert subscriber data requests sent by MAP. Availability: per MAP service Type: Counter.	Int32
map-isd-err-tx	Description: Total number of insert subscriber data failure response sent by MAP. Availability: per MAP service Type: Counter.	Int32

Variables	Description	Data Type
map-auth-fail-rept-req-tx	Description: Total number of Authentication Failure Report Request messages transmitted by MAP. Triggers: Counter increments when a message is initiated to inform HLR that certain vectors had problem in authenticating with the MS. Availability: per MAP service Type: Counter.	Int32
map-auth-fail-rept-rsp-rx	Description: Total number of Authentication Failure Report Request messages received by MAP. Triggers: Counter increments when successful response is received in response to map-auth-fail-rep-req-tx. Availability: per MAP service Type: Counter.	Int32
map-auth-fail-rept-err-rx	Description: Total number of User Error and Provider Error received for the Authentication Failure Report Request sent to HLR. Triggers: Counter increments when MAP Return Error/Provider Error is received in response to map-auth-fail-rep-req-tx message. There will be no effect on the call due to this. Availability: per MAP service Type: Counter.	Int32
map-auth-fail-rept-timeouts-rcvd	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments when MAP Return Error / Provider Error is received in response to map-auth-fail-rep-req-tx. There will be no effect on the call due to this. Availability: per MAP service Type: Counter.	Int32
map-purge-req-tx	Description: Total number of MAP Purge Request messages initiated towards HLR. Triggers: Counter increments when MAP Purge Request is transmitted. Availability: per MAP service Type: Counter.	Int32
map-purge-success	Description: Total number of successful MAP Purge Request messages sent to HLR. Triggers: Counter increments when successful response is received from HLR. Availability: per MAP service Type: Counter.	Int32
map-purge-fail	Description: Total number of Failure response received from HLR. Triggers: Counter increments when MAP Return Error / Provider Error is received in response. Availability: per MAP service Type: Counter.	Int32
map-purge-timeouts-rcvd	Description: Total number of timeouts that occurred while waiting for response from HLR. Triggers: Counter increments when there is no response from HLR. Availability: per MAP service Type: Counter.	Int32
map-hlr-reset-rcvd	Description: Total number of HLR reset indicator received by MAP. Availability: per MAP service Type: Counter.	Int32
map-mo-fwd-req-sent	Description: Total number of mobile originated forward request messages sent to MAP. Availability: per MAP service Type: Counter.	Int32

Variables	Description	Data Type
map-mo-fwd-rsp-rcvd	Description: Total number of mobile originated forward response messages received from MAP. Availability: per MAP service Type: Counter.	Int32
map-mo-fwd-rsp-failed	Description: Total number of mobile originated forward response messages failed at MAP. Availability: per MAP service Type: Counter.	Int32
map-mo-fwd-rsp-time-out	Description: Total number of mobile originated forward response messages timed-out at MAP. Availability: per MAP service Type: Counter.	Int32
map-mt-fwd-req-sent	Description: Total number of mobile terminated forward request messages sent to MAP. Availability: per MAP service Type: Counter.	Int32
map-mt-fwd-rsp-rcvd	Description: Total number of mobile terminated forward request messages received from MAP. Availability: per MAP service Type: Counter.	Int32
map-mt-fwd-rsp-failed	Description: Total number of mobile terminated forward response messages failed at MAP. Availability: per MAP service Type: Counter.	Int32
map-ready-for-sm-req	Description: Total number of MAP ready for session management request received. Availability: per MAP service Type: Counter.	Int32
map-ready-for-sm-rsp	Description: Total number of MAP ready for session management request response received. Availability: per MAP service Type: Counter.	Int32
map-ready-for-sm-rsp-failed	Description: Total number of MAP ready for session management requests failed. Availability: per MAP service Type: Counter.	Int32
map-ready-for-sm-rsp-time-out	Description: Total number of MAP ready for session management requests timed-out. Availability: per MAP service Type: Counter.	Int32
tcap-total-active-trans	Description: Total number of active transaction capabilities application part (TCAP) Dialogs in the system. Triggers: Counter increments when a new TCAP Dialog is created. Type: Gauge	Int32
tcap-total-active-invoks	Description: Total number of active transactions invoked by TCAP. Type: Gauge	Int32
tcap-total-msg-drops	Description: Total number of TCAP message drops. Type: Counter.	Int32
tcap-total-msg-rcvd	Description: Total number of TCAP message received. Type: Counter.	Int32

Variables	Description	Data Type
tcap-total-msg-sent	Description: Total number of TCAP message sent. Type: Counter.	Int32
tcap-uni-dir-msg-rcvd	Description: Total number of TCAP unidirectional messages received. Type: Counter.	Int32
tcap-uni-dir-msg-sent	Description: Total number of TCAP unidirectional messages sent. Type: Counter.	Int32
tcap-begin-msg-rcvd	Description: Total number of messages received for TCAP begin state. Type: Counter.	Int32
tcap-begin-msg-sent	Description: Total number of messages sent for TCAP begin state. Type: Counter.	Int32
tcap-continue-msg-rcvd	Description: Total number of messages received for TCAP continue state. Type: Counter.	Int32
tcap-continue-msg-sent	Description: Total number of messages sent for TCAP continue state. Type: Counter.	Int32
tcap-end-msg-rcvd	Description: Total number of messages received for TCAP end state. Type: Counter.	Int32
tcap-end-msg-sent	Description: Total number of messages sent for TCAP end state. Type: Counter.	Int32
tcap-total-abort-rcvd	Description: Total number of messages received for TCAP abort state. Type: Counter.	Int32
tcap-total-abort-sent	Description: Total number of messages sent for TCAP abort state. Type: Counter.	Int32
tcap-total-comp-rx	Description: Total number of TCAP components received. Type: Counter.	Int32
tcap-total-comp-tx	Description: Total number of TCAP components sent. Type: Counter.	Int32
tcap-total-comp-invoke-rx	Description: Total number of invoke messages for TCAP component received. Type: Counter.	Int32
tcap-total-comp-invoke-tx	Description: Total number of invoke messages for TCAP component sent. Type: Counter.	Int32
tcap-comp-retresult-rx	Description: Total number of return result messages for TCAP component received. Type: Counter.	Int32
tcap-comp-retresult-tx	Description: Total number of return result messages for TCAP component sent. Type: Counter.	Int32
tcap-comp-reterr-rx	Description: Total number of return error messages for TCAP component received. Type: Counter.	Int32
tcap-comp-reterr-tx	Description: Total number of return error messages for TCAP component sent. Type: Counter.	Int32

Variables	Description	Data Type
tcap-comp-retrej-rx	Description: Total number of return reject messages for TCAP component received. Type: Counter.	Int32
tcap-comp-retrej-tx	Description: Total number of return reject messages for TCAP component sent. Type: Counter.	Int32
tcap-tran-unrec-msgtype-rx	Description: Total number of protocol errors in transaction portion (P-ABORT) with unrecognized message type for TCAP received. Type: Counter.	Int32
tcap-tran-unrec-msgtype-tx	Description: Total number of protocol errors in transaction portion with unrecognized message type for TCAP sent. Type: Counter.	Int32
tcap-tran-incorrect-rx	Description: Total number of protocol errors in transaction portion with incorrect information for TCAP received. Type: Counter.	Int32
tcap-tran-incorrect-tx	Description: Total number of protocol errors in transaction portion with incorrect information for TCAP sent. Type: Counter.	Int32
tcap-tran-badformed-rx	Description: Total number of protocol errors in transaction portion with badly formatted transaction portion for TCAP received. Type: Counter.	Int32
tcap-tran-badformed-tx	Description: Total number of protocol errors in transaction portion with badly formatted transaction portion for TCAP sent. Type: Counter.	Int32
tcap-tran-unrecognised-rx	Description: Total number of protocol errors in transaction portion with unrecognized transaction portion for TCAP received. Type: Counter.	Int32
tcap-tran-unrecognised-tx	Description: Total number of protocol errors in transaction portion with unrecognized transaction portion for TCAP sent. Type: Counter.	Int32
tcap-tran-resource-limit-rx	Description: Total number of protocol errors in transaction portion with resource limit message for TCAP received. Type: Counter.	Int32
tcap-tran-resource-limit-tx	Description: Total number of protocol errors in transaction portion with resource limit message for TCAP sent. Type: Counter.	Int32
tcap-comp-unrecognised-rx	Description: Total number of errors in component portion with unrecognized information for TCAP received. Type: Counter.	Int32
tcap-comp-unrecognised-tx	Description: Total number of errors in component portion with unrecognized information for TCAP sent. Type: Counter.	Int32

Variables	Description	Data Type
tcap-comp-incorrect-rx	Description: Total number of errors in component portion with incorrect information for TCAP received. Type: Counter.	Int32
tcap-comp-incorrect-tx	Description: Total number of errors in component portion with incorrect information for TCAP sent. Type: Counter.	Int32
tcap-comp-badformed-rx	Description: Total number of errors in component portion with badly formed information for TCAP received. Type: Counter.	Int32
tcap-comp-badformed-tx	Description: Total number of errors in component portion with badly formed information for TCAP sent. Type: Counter.	Int32
tcap-comp-unrec-linkid-rx	Description: Total number of errors in component portion with unrecognized link id for TCAP received. Type: Counter.	Int32
tcap-comp-unrec-linkid-tx	Description: Total number of errors in component portion with unrecognized link id for TCAP sent. Type: Counter.	Int32
tcap-comp-unrec-invid-res-rx	Description: Total number of errors in component portion with unrecognized invoke id (return result) for TCAP received. Type: Counter.	Int32
tcap-comp-unrec-invid-res-tx	Description: Total number of errors in component portion with unrecognized invoke id (return result) for TCAP sent. Type: Counter.	Int32
tcap-comp-unexp-res-rx	Description: Total number of errors in component portion with unexpected return result for TCAP received. Type: Counter.	Int32
tcap-comp-unexp-res-tx	Description: Total number of errors in component portion with unexpected return result for TCAP sent. Type: Counter.	Int32
tcap-comp-unrec-invid-err-rx	Description: Total number of errors in component portion with unrecognized invoke id (return error) for TCAP received. Type: Counter.	Int32
tcap-comp-unrec-invid-err-tx	Description: Total number of errors in component portion with unrecognized invoke id (return error) for TCAP sent. Type: Counter.	Int32
tcap-comp-unexp-err-rx	Description: Total number of errors in component portion with unexpected return error for TCAP received. Type: Counter.	Int32
tcap-comp-unexp-err-tx	Description: Total number of errors in component portion with unexpected return error for TCAP sent. Type: Counter.	Int32

Variables	Description	Data Type
tcap-user-duplicate-invid-rx	Description: Total number of user generated errors of duplicate invoke id for TCAP received. Type: Counter.	Int32
tcap-user-duplicate-invid-tx	Description: Total number of user generated errors of duplicate invoke id for TCAP sent. Type: Counter.	Int32
tcap-user-unrec-opcode-rx	Description: Total number of user generated errors of unrecognized operation code for TCAP received. Type: Counter.	Int32
tcap-user-unrec-opcode-tx	Description: Total number of user generated errors of unrecognized operation code for TCAP sent. Type: Counter.	Int32
tcap-user-incorr-params-rx	Description: Total number of user generated errors of incorrect invoke parameter for TCAP received. Type: Counter.	Int32
tcap-user-incorr-params-tx	Description: Total number of user generated errors of incorrect invoke parameter for TCAP sent. Type: Counter.	Int32
tcap-user-resourcelimit-rx	Description: Total number of user generated errors of resource limit invoke error for TCAP received. Type: Counter.	Int32
tcap-user-resourcelimit-tx	Description: Total number of user generated errors of resource limit invoke error for TCAP sent. Type: Counter.	Int32
tcap-user-initiate-release-rx	Description: Total number of user generated errors of release initiated invoke error for TCAP received. Type: Counter.	Int32
tcap-user-initiate-release-tx	Description: Total number of user generated errors of release initiated invoke error for TCAP sent. Type: Counter.	Int32
tcap-user-unexp-linked-resp-rx	Description: Total number of user generated errors of unexpected linked response error for TCAP received. Type: Counter.	Int32
tcap-user-unexp-linked-resp-tx	Description: Total number of user generated errors of unexpected linked response error for TCAP sent. Type: Counter.	Int32
tcap-user-unexp-linked-oper-rx	Description: Total number of user generated errors of unexpected linked operation error for TCAP received. Type: Counter.	Int32
tcap-user-unexp-linked-oper-tx	Description: Total number of user generated errors of unexpected linked operation error for TCAP sent. Type: Counter.	Int32
tcap-user-res-incorr-params-rx	Description: Total number of user generated errors of result code with incorrect parameter for TCAP received. Type: Counter.	Int32

Variables	Description	Data Type
tcap-user-res-incorr-params-tx	Description: Total number of user generated errors of result code with incorrect parameter for TCAP sent. Type: Counter.	Int32
tcap-user-res-unrec-errcode-rx	Description: Total number of user generated errors of result code with unrecognized error code for TCAP received. Type: Counter.	Int32
tcap-user-res-unrec-errcode-tx	Description: Total number of user generated errors of result code with unrecognized error code for TCAP sent. Type: Counter.	Int32
tcap-user-res-unexp-errcode-rx	Description: Total number of user generated errors of result code with unexpected error code for TCAP received. Type: Counter.	Int32
tcap-user-res-unexp-errcode-tx	Description: Total number of user generated errors of result code with unexpected error code for TCAP sent. Type: Counter.	Int32
tcap-user-err-incorr-params-rx	Description: Number of user generated errors of error code with incorrect parameter for TCAP received. Type: Counter.	Int32
tcap-user-err-incorr-params-tx	Description: Total number of user generated errors of error code with incorrect parameter for TCAP sent. Type: Counter.	Int32
mo-sms-in-progress	Description: Number of mobile originated SMS that are waiting in the SGSN to be delivered. Type: Gauge.	Int32
mt-sms-in-progress	Description: Number of mobile terminated (MT) SMS in progress. Type: Gauge.	Int32
mt-sms-in-queue	Description: New gauge in release 9.0: Total number of mobile terminated SMS in the queue. Triggers: If there is already an MT-SMS transaction in progress, then the gauge increments when any new messages are received and queued. Availability: per MAP service Type: Gauge	Int32
sms-memory-available-in-progress	Description: Number of procedures for retrieval of available SMS memory in progress. Type: Gauge.	Int32
mo-sms-attempted	Description: Total number of mobile originated SMSs attempted. Type: Counter	Int32
mo-sms-successful	Description: Total number of mobile originated SMSs successful. Type: Counter	Int32
mt-sms-attempted	Description: Total number of mobile terminated SMSs attempted. Type: Counter	Int32
mt-sms-successful	Description: Total number of mobile terminated SMSs successful. Type: Counter	Int32

Variables	Description	Data Type
sms-memory-available-attempted	Description: Total number of procedures for retrieval of available SMS memory attempted. Type: Counter	Int32
sms-memory-available-successful	Description: Total number of procedures for retrieval of available SMS memory successful. Type: Counter	Int32
conn-prot-data-tx	Description: Total number of protocol data units sent during connection setup. Type: Counter	Int32
conn-prot-data-rx	Description: Total number of protocol data units received during connection setup. Type: Counter	Int32
conn-prot-ack-tx	Description: Total number of Ack messages sent during connection setup. Type: Counter	Int32
conn-prot-ack-rx	Description: Total number of Ack messages received during connection setup. Type: Counter	Int32
conn-prot-error-tx	Description: Total number of protocol errors during connection setup in Tx message. Type: Counter	Int32
conn-prot-error-rx	Description: Total number of protocol errors during connection setup in Rx message. Type: Counter	Int32
conn-prot-error-nwt-fail-tx	Description: Total number of protocol errors during connection setup due to network failure in Tx message. Type: Counter	Int32
conn-prot-error-nwt-fail-rx	Description: Total number of protocol errors during connection setup due to network failure in Rx message. Type: Counter	Int32
conn-prot-error-congestion-tx	Description: Total number of protocol errors during connection setup due to congestion in Tx message. Type: Counter	Int32
conn-prot-error-congestion-rx	Description: Total number of protocol errors during connection setup due to congestion in Rx message. Type: Counter	Int32
conn-prot-error-invalid-tid-tx	Description: Total number of protocol errors during connection setup due to invalid transaction id (TID) in Tx message. Type: Counter	Int32
conn-prot-error-invalid-tid-rx	Description: Total number of protocol errors during connection setup due to invalid transaction id (TID) in Rx message. Type: Counter	Int32
conn-prot-error-invalid-semantic-tx	Description: Total number of protocol errors during connection setup due to invalid semantics in Tx message. Type: Counter	Int32
conn-prot-error-invalid-semantic-rx	Description: Total number of protocol errors during connection setup due to invalid semantics in Rx message. Type: Counter	Int32

Variables	Description	Data Type
conn-prot-error-invalid-mand-info-tx	Description: Total number of protocol errors during connection setup as mandatory information in Tx message is invalid. Type: Counter	Int32
conn-prot-error-invalid-mand-info-rx	Description: Total number of protocol errors during connection setup as mandatory information in Rx message is invalid. Type: Counter	Int32
conn-prot-error-invalid-msg-type-tx	Description: Total number of protocol errors during connection setup due to invalid Tx message type. Type: Counter	Int32
conn-prot-error-invalid-msg-type-rx	Description: Total number of protocol errors during connection setup due to invalid Tx message type. Type: Counter	Int32
conn-prot-error-invalid-prot-state-tx	Description: Total number of protocol errors during connection setup as protocol state in Tx message is invalid. Type: Counter	Int32
conn-prot-error-invalid-prot-state-rx	Description: Total number of protocol errors during connection setup as protocol state in Rx message is invalid. Type: Counter	Int32
conn-prot-error-invalid-ie-tx	Description: Total number of protocol errors during connection setup as information element in Tx message is invalid. Type: Counter	Int32
conn-prot-error-invalid-ie-rx	Description: Total number of protocol errors during connection setup as information element in Rx message is invalid. Type: Counter	Int32
conn-prot-error-protocol-error-tx	Description: Total number of protocol errors during connection setup as protocol error in Tx message. Type: Counter	Int32
conn-prot-error-protocol-error-rx	Description: Total number of protocol errors during connection setup as protocol error in Rx message. Type: Counter	Int32
conn-prot-error-undefined-cause-tx	Description: Total number of protocol errors during connection setup due to unspecified error in Tx message. Type: Counter	Int32
conn-prot-error-undefined-cause-rx	Description: Total number of protocol errors during connection setup due to unspecified error in Rx message. Type: Counter	Int32
conn-prot-data-dropped	Description: Total number of data packets dropped during connection setup. Type: Counter	Int32
conn-prot-ack-dropped	Description: Total number of Ack message dropped during connection setup. Type: Counter	Int32

Variables	Description	Data Type
conn-prot-error-dropped	Description: Total number of data packets dropped during connection setup due to error in connection. Type: Counter	Int32
conn-prot-inval-tid-rcvd	Description: Total number of message dropped during connection setup due to invalid transaction id (TID) received. Type: Counter	Int32
relay-prot-data-tx	Description: Total number of protocol data units sent during message relay. Type: Counter	Int32
relay-prot-data-rx	Description: Total number of protocol data units received during message relay. Type: Counter	Int32
relay-prot-ack-tx	Description: Total number of Ack messages sent during message relay. Type: Counter	Int32
relay-prot-ack-rx	Description: Total number of Ack messages received during message relay. Type: Counter	Int32
relay-prot-err-tx	Description: Total number of protocol errors during message relay in Tx message. Type: Counter	Int32
relay-prot-err-rx	Description: Total number of protocol errors during message relay n Rx message. Type: Counter	Int32
relay-prot-err-unassigned-num	Description: Total number of protocol errors during message relay due to unassigned protocol number. Type: Counter	Int32
relay-prot-err-opr-determ-barring	Description: Total number of protocol errors during message relay due to operator determined barring. Type: Counter	Int32
relay-prot-err-call-barred	Description: Total number of protocol errors during message relay due to call barring. Type: Counter	Int32
relay-prot-err-reserved	Description: Total number of protocol errors during message relay due to reserved resources. Type: Counter	Int32
relay-prot-err-sm-transfer-rej	Description: Total number of protocol errors during message relay due to session manager transfer rejection. Type: Counter	Int32
relay-prot-err-dest-out-of-order	Description: Total number of protocol errors during message relay due to out of order on destination. Type: Counter	Int32
relay-prot-err-unidentified-sub	Description: Total number of protocol errors during message relay due to unidentified subscriber. Type: Counter	Int32
relay-prot-err-facility-rej	Description: Total number of protocol errors during message relay due facility rejection. Type: Counter	Int32

Variables	Description	Data Type
relay-prot-err-unknown-subs	Description: Total number of protocol errors during message relay due to unknown subscriber. Type: Counter	Int32
relay-prot-err-netwk-out-of-order	Description: Total number of protocol errors during message relay as network in out-of-order. Type: Counter	Int32
relay-prot-err-temp-fail	Description: Total number of protocol errors during message relay due to temporary failure in network. Type: Counter	Int32
relay-prot-err-congestion	Description: Total number of protocol errors during message relay due to congestion in network. Type: Counter	Int32
relay-prot-err-not-subscribed	Description: Total number of protocol errors during message relay as this service is not subscribed by subscriber. Type: Counter	Int32
relay-prot-err-not-implemented	Description: Total number of protocol errors during message relay as this service is not yet implemented. Type: Counter	Int32
relay-prot-err-interworking-err	Description: Total number of protocol errors during message relay due to interworking error between two network or technology. Type: Counter	Int32
relay-prot-err-res-unavail	Description: Total number of protocol errors during message relay as resources are not available. Type: Counter	Int32
relay-prot-err-mem-capacity-exceed	Description: Total number of protocol errors during message relay as capacity exceeded. Type: Counter	Int32
relay-prot-err-inval-ref-num-tx	Description: Total number of protocol errors during message relay as invalid reference in Tx message. Type: Counter	Int32
relay-prot-err-inval-ref-num-rx	Description: Total number of protocol errors during message relay as invalid reference in Rx message. Type: Counter	Int32
relay-prot-err-inval-semantic-tx	Description: Total number of protocol errors during message relay due to invalid semantics in Tx message. Type: Counter	Int32
relay-prot-err-inval-semantic-rx	Description: Total number of protocol errors during message relay due to invalid semantics in Rx message. Type: Counter	Int32
relay-prot-err-inval-mand-info-tx	Description: Total number of protocol errors during message relay as mandatory information in Tx message is invalid. Type: Counter	Int32
relay-prot-err-inval-mand-info-rx	Description: Total number of protocol errors during message relay as mandatory information in Rx message is invalid. Type: Counter	Int32

Variables	Description	Data Type
relay-prot-err-inval-msg-type-tx	Description: Total number of protocol errors during message relay due to invalid Tx message type. Type: Counter	Int32
relay-prot-err-inval-msg-type-rx	Description: Total number of protocol errors during message relay due to invalid Tx message type. Type: Counter	Int32
relay-prot-err-inval-prot-state-tx	Description: Total number of protocol errors during message relay as protocol state in Tx message is invalid. Type: Counter	Int32
relay-prot-err-inval-prot-state-rx	Description: Total number of protocol errors during message relay as protocol state in Rx message is invalid. Type: Counter	Int32
relay-prot-err-inval-ie-tx	Description: Total number of protocol errors during message relay as information element in Tx message is invalid. Type: Counter	Int32
relay-prot-err-inval-ie-rx	Description: Total number of protocol errors during message relay as the information element in Rx message is invalid. Type: Counter	Int32
relay-prot-err-protocol-error-rx	Description: Total number of RP ERROR messages sent with the cause Protocol Error in the message header. Triggers: Counter increments when receiving an RP ERROR, with cause Protocol Error, from the MS/SMSC. Availability: per MAP service Type: Counter	Int32
relay-prot-err-protocol-error-tx	Description: Total number of protocol errors during message relay when there are protocol errors in the transmitted message. Type: Counter	Int32
relay-prot-err-unidentified-error-tx	Description: Total number of protocol errors during message relay due to unspecified error in Tx message. Type: Counter	Int32
relay-prot-err-unidentified-error-rx	Description: Total number of protocol errors during message relay due to unspecified error in Rx message. Type: Counter	Int32
relay-prot-smma-rx	Description: Counter new in release 9.0: Total number RP SMMA messages received. Triggers: Counter increments when the SGSN receives an RP SMMA message from the MS/UE. Availability: per MAP service Type: Counter	Int32
relay-prot-data-dropped	Description: Total number of data packets dropped during message relay. Type: Counter	Int32
relay-prot-ack-dropped	Description: Total number of Ack message dropped during message relay. Type: Counter	Int32

Variables	Description	Data Type
relay-prot-error-dropped	Description: Total number of data packets dropped during message relay due to error in connection. Type: Counter	Int32
relay-prot-decode-failure	Description: Total number of message dropped during message relay due to invalid transaction id (TID) received. Type: Counter	Int32
concat-mo-sms	Description: Total number of concatenated mobile originated SMSs. Type: Counter	Int32
conn-prot-timer-expiry	Description: Total number of events when timer expired during connection setup. Type: Counter	Int32
tr1n-timer-expiry	Description: Total number of events when TR1N timer expired during mobile terminated SMS is in wait state for RP-ACK. Type: Counter	Int32
tr2n-timer-expiry	Description: Total number of events when TR2N timer expired during mobile terminated SMS is in wait state to send RP-ACK. Type: Counter	Int32
conn-prot-data-retrans	Description: Total number of protocol data units retransmitted during connection setup. Type: Counter	Int32
relay-prot-msg-encode-fail	Description: Total number of message encoding failed during message relay. Type: Counter	Int32
conn-prot-data-tx-fail	Description: Total number of protocol data units Tx messages failed during connection setup. Type: Counter	Int32
conn-prot-data-inval-tid	Description: Total number of protocol data units with invalid transaction id (ID) during connection setup. Type: Counter	Int32
conn-prot-max-retrans-reached	Description: Total number of events when retransmission limit exhausted during connection setup. Type: Counter	Int32
mt-fail-no-db-rec	Description: Total number of mobile terminated messages failed as not database record available. Type: Counter	Int32
mt-fail-conn-prot-data-no-ack-rcvd	Description: Total number of mobile terminated messages failed as no acknowledgement received during connection setup. Type: Counter	Int32
mt-fail-fwd-busy-subs	Description: Total mobile terminated messages failed due to busy subscriber. Type: Counter	Int32
mt-fail-fwd-detached-subs	Description: Total mobile terminated messages failed due to detached subscriber. Type: Counter	Int32
mt-fail-mt-queue-full	Description: Total mobile terminated messages failed as messaged queue was full. Type: Counter	Int32

Variables	Description	Data Type
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 62

SGTP Schema Statistics

The SGTP schema provides operational statistics that can be used for monitoring and troubleshooting the following products: SGSN

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 62. Bulk Statistic Variables in the SGTP Schema

Variables	Description	Data Type
vpn-id	Identifier for the VPN context in which this SGTP service is running. This is a key variable.	Int32
vpn-name	Name of the VPN context in which this SGTP service is running. This is a key variable.	String

■ Common Syntax Options

Variables	Description	Data Type
service-name	Name of the SGTP service for which this bulk statistics are collected. This is a key variable.	String
iups-service	Name of the corresponding Iu-PS interface service for this SGTP service. This is a key variable.	String
rnc-address	Address of the corresponding radio network controller (RNC) for this SGTP service. This is a key variable.	String
ggsn-address	This statistic is obsoleted.	
sgtpc-total-cpc-req	Total GTP-C messages for create PDP context requests received.	Int32
sgtpc-cpc-req-v1-pri	Total GTP-Cv1 messages for create primary PDP context requests received.	Int32
sgtpc-cpc-req-v0-pri	Total GTP-Cv0 messages for create primary PDP context requests received.	Int32
sgtpc-cpc-req-sec	Total GTP-C (v1 and v0) messages for create secondary PDP context requests received.	Int32
sgtpc-cpc-req-accept	Total GTP-C (v1 and v0) messages for create PDP context requests accepted.	Int32
sgtpc-cpc-req-denied	Total GTP-C (v1 and v0) messages for create PDP context requests denied.	Int32
sgtpc-cpc-rsp-v1-pri	Total GTP-Cv1 messages response sent for create primary PDP context requests.	Int32
sgtpc-cpc-rsp-v0-pri	Total GTP-Cv0 messages response sent for create primary PDP context requests.	Int32
sgtpc-cpc-rsp-sec	Total GTP (v1 and v0) message response for create secondary PDP context requests sent.	Int32
sgtpc-total-upc-req	Total GTP-C (v1 and v0) messages for update PDP context requests received.	Int32
sgtpc-upc-req-v1-tx	Total GTP-Cv1 message response for update PDP context requests sent.	Int32
sgtpc-upc-req-v0-tx	Total GTP-Cv0 message response for update PDP context requests sent.	Int32
sgtpc-upc-req-v1-rx	Total GTP-Cv1 messages for update PDP context requests received.	Int32
sgtpc-upc-req-v0-rx	This statistic has been obsoleted.	
sgtpc-upc-req-accept-tx	Total GTP-C update PDP context request accept messages sent.	Int32
sgtpc-upc-req-accept-rx	Total GTP-C update PDP context request accept messages received.	Int32
sgtpc-upc-req-accept-v1-tx	Total GTP-C v1 update PDP context requests accept messages sent.	Int32
sgtpc-upc-req-accept-v1-rx	Total GTP-Cv1 message response for update PDP context requests received.	Int32
sgtpc-upc-req-accept-v0-rx	Total GTP-C v0 update PDP context requests accept messages received.	Int32
sgtpc-upc-req-denied-tx	Total GTP-C (v1 and v0) update PDP context requests denied messages sent.	Int32
sgtpc-upc-req-denied-rx	Total GTP-C (v1 and v0) update PDP context requests denied messages received.	Int32
sgtpc-total-dpc-req	Total GTP-C (v1 and v0) messages for delete PDP context requests received.	Int32

Variables	Description	Data Type
sgtpc-dpc-req-v1-tx	Total GTP-Cv1 message response for delete PDP context requests sent.	Int32
sgtpc-dpc-req-v0-tx	Total GTP-Cv0 message response for delete PDP context requests sent.	Int32
sgtpc-dpc-req-v1-rx	Total GTP-Cv1 messages for update PDP delete requests received.	Int32
sgtpc-dpc-req-v0-rx	Total GTP-Cv0 message response for delete PDP context requests received.	Int32
sgtpc-dpc-req-accept-tx	Total GTP-C delete PDP context request accept messages sent.	Int32
sgtpc-dpc-req-accept-rx	Total GTP-C delete PDP context request accept messages received.	Int32
sgtpc-dpc-req-accept-v1-tx	Total GTP-Cv1 delete PDP context requests accept messages sent.	Int32
sgtpc-dpc-req-accept-v0-tx	Total GTP-Cv0 delete PDP context requests accept messages received.	Int32
sgtpc-dpc-req-accept-v1-rx	Total GTP-Cv1 delete PDP context requests accept messages received.	Int32
sgtpc-dpc-req-accept-v0-rx	Total GTP-Cv0 delete PDP context requests accept messages received.	sgtpc-dpc-req-accept-v1-rx
sgtpc-dpc-req-denied-tx	Total GTP-C (v1 and v0) delete PDP context requests denied messages sent.	Int32
sgtpc-dpc-req-denied-rx	Total GTP-C (v1 and v0) delete PDP context requests denied messages received.	Int32
sgtpc-total-pdu-not-req	Total number of GTP-C (v1 and v0) PDUs not requested but received for primary PDP context.	Int32
sgtpc-pdu-not-req-v1-pri	Total number of GTP-Cv1 PDUs not requested but received for primary PDP context.	Int32
sgtpc-pdu-not-req-v0-pri	Total number of GTP-Cv0 PDUs not requested but received for primary PDP context.	Int32
sgtpc-pdu-not-req-sec	Total number of GTP-C (v1 and v0) PDUs not requested but received for secondary PDP context.	Int32
sgtpc-pdu-not-req-v1-pri-ret	Total number of GTP-Cv1 PDUs not requested but received for primary PDP context and retried.	Int32
sgtpc-pdu-not-req-v0-pri-ret	Total number of GTP-Cv0 PDUs not requested but received for primary PDP context and retried.	Int32
sgtpc-pdu-not-req-sec-ret	Total number of GTP-C (v1 and v0) PDUs not requested but received for secondary PDP context and retried.	Int32
sgtpc-pdu-not-req-accept-v1	Total number of GTP-Cv1 PDUs not requested but received for secondary PDP context and accepted.	Int32
sgtpc-pdu-not-req-accept-v0	Total number of GTP-Cv0 PDUs not requested but received for secondary PDP context and accepted.	Int32

■ Common Syntax Options

Variables	Description	Data Type
sgtpc-pdu_not-req-denied	Total number of GTP-C (v1 and v0) PDUs not requested but received and denied.	Int32
sgtpc-total-pdu-not-rej-req	Total number of GTP-C (v1 and v2) PDUs requested and not rejected.	Int32
sgtpc-pdu-not-rej-req-v1-pri	Total number of GTP-Cv1 PDUs requested and not rejected for primary PDP context.	Int32
sgtpc-pdu-not-rej-req-v0-pri	Total number of GTP-Cv0 PDUs requested and not rejected for primary PDP context.	Int32
sgtpc-pdu-not-rej-req-v1-pri-ret	Total number of GTP-Cv1 PDUs requested and not rejected for primary PDP context but retransmitted.	Int32
sgtpc-pdu-not-rej-req-v0-pri-ret	Total number of GTP-Cv0 PDUs not requested and not rejected for primary PDP context but retransmitted.	Int32
sgtpc-pdu-not-rej-req-accept-v1	Total number of GTP-Cv1 PDUs requested and not rejected for primary PDP context.	Int32
sgtpc-pdu-not-rej-req-accept-v0	Total number of GTP-Cv0 PDUs requested and not rejected for primary PDP context.	Int32
sgtpc-pdu_not-rej-req-denied	Total number of PDU notification requests which were not accepted.	Int32
sgtpc-total-sri-req	Total number of GTP-C (v1 and v0) Send Routing Information (SRI) request messages transmitted to the HLR(s).	Int32
sgtpc-sri-req-v1	Total number of GTP-Cv1 Send Routing Information (SRI) request messages transmitted to the HLR(s).	Int32
sgtpc-sri-req-v0	Total number of GTP-Cv0 Send Routing Information (SRI) request messages transmitted to the HLR(s).	Int32
sgtpc-sri-req-v1-ret	The total number of Total number of GTP-Cv1 Send Routing Information (SRI) request messages retransmitted to the HLR(s).	Int32
sgtpc-sri-req-v0-ret	Total number of GTP-Cv0 Send Routing Information (SRI) request messages retransmitted to the HLR(s).	Int32
sgtpc-sri-req-denied	Total number of GTP-C (v1 and v0) Send Routing Information (SRI) request messages transmitted to the HLR(s) and denied.	Int32
sgtpc-total-fail-rpt-req	Total number of GTP-C (v1 and v0) fail report messages requested.	Int32
sgtpc-fail-rpt-req-v1	Total number of GTP-Cv1 fail report messages requested.	Int32
sgtpc-fail-rpt-req-v0	Total number of GTP-Cv0 fail report messages requested.	Int32
sgtpc-fail-rpt-req-v1-ret	Total number of GTP-Cv1 fail report messages requested and retransmitted.	Int32
sgtpc-fail-rpt-req-v0-ret	Total number of GTP-Cv0 fail report messages requested and retransmitted.	Int32
sgtpc-fail-rpt-req-denied	Total number of GTP-Cv1 fail report messages requested and denied.	Int32

Variables	Description	Data Type
sgtpc-ident-req-v1-tx	Total GTP-C v1 identification request messages sent.	Int32
sgtpc-ident-req-v0-tx	Total GTP-C v0 identification request messages sent.	Int32
sgtpc-ident-req-v1-rx	Total GTP-C v1 identification request messages received.	Int32
sgtpc-ident-req-v0-rx	Total GTP-C v0 identification request messages received.	Int32
sgtpc-ident-req-accept-tx	Total GTP-C identification request accept messages sent.	Int32
sgtpc-ident-req-accept-rx	Total GTP-C identification request accept messages received.	Int32
sgtpc-ident-req-accept-v1-tx	Total GTP-Cv1 identification request accept messages sent.	Int32
sgtpc-ident-req-accept-v0-tx	Total GTP-Cv0 identification request accept messages sent.	Int32
sgtpc-ident-req-accept-v1-rx	Total GTP-Cv1 identification request accept messages received.	Int32
sgtpc-ident-req-accept-v0-rx	Total GTP-Cv0 identification request accept messages received.	Int32
sgtpc-ident-req-denied-tx	Total GTP-C (v1 and v0) identification request denied messages sent.	Int32
sgtpc-ident-req-denied-rx	Total GTP-C (v1 and v0) identification request denied messages received.	Int32
sgtpc-sgsn-ctxt-req-v1-tx	Total GTP-Cv1 SGSN context request messages sent.	Int32
sgtpc-sgsn-ctxt-req-v0-tx	Total GTP-Cv0 SGSN context request messages sent.	Int32
sgtpc-sgsn-ctxt-req-v1-rx	Total GTP-Cv1 SGSN context request messages received.	Int32
sgtpc-sgsn-ctxt-req-v0-rx	Total GTP-Cv0 SGSN context request messages received.	Int32
sgtpc-sgsn-ctxt-req-accept-tx	Total GTP-C SGSN context request accept messages sent.	Int32
sgtpc-sgsn-ctxt-req-accept-rx	Total GTP-C SGSN context request accept messages received.	Int32
sgtpc-sgsn-ctxt-req-accept-v1-tx	Total GTP-Cv1 SGSN context request accept messages sent.	Int32
sgtpc-sgsn-ctxt-req-accept-v0-tx	Total GTP-Cv0 SGSN context request accept messages sent.	Int32
sgtpc-sgsn-ctxt-req-accept-v1-rx	Total GTP-Cv1 SGSN context request accept messages received.	Int32

■ Common Syntax Options

Variables	Description	Data Type
sgtpc-sgsn-ctxt-req-accept-v0-rx	Total GTP-Cv0 SGSN context request accept messages received.	Int32
sgtpc-sgsn-ctxt-req-denied-tx	Total GTP-C (v1 and v0) SGSN context request denied messages sent.	Int32
sgtpc-sgsn-ctxt-req-denied-rx	Total GTP-C (v1 and v0) SGSN context request denied messages received.	Int32
sgtpc-sgsn-ctxt-ack-accept-tx	Total GTP-C SGSN context acknowledgement accept messages sent.	Int32
sgtpc-sgsn-ctxt-ack-accept-rx	Total GTP-C SGSN context acknowledgement accept messages sent.	Int32
sgtpc-sgsn-ctxt-ack-accept-v1-tx	Total GTP-Cv1 SGSN context request accept acknowledge messages sent.	Int32
sgtpc-sgsn-ctxt-ack-accept-v0-tx	Total GTP-Cv0 SGSN context request accept acknowledge messages sent.	Int32
sgtpc-sgsn-ctxt-ack-accept-v1_rx	Total GTP-Cv1 SGSN context request accept acknowledge messages received.	Int32
sgtpc-sgsn-ctxt-ack-accept-v0_rx	Total GTP-Cv0 SGSN context request accept acknowledge messages received.	Int32
sgtpc-sgsn-ctxt-ack-denied-tx	Total GTP-C (v1 and v0) SGSN context request denial acknowledge messages sent.	Int32
sgtpc-sgsn-ctxt-ack-denied-rx	Total GTP-C (v1 and v0) SGSN context request denial acknowledge messages received.	Int32
sgtpc-fwd-reloc-req-tx	Total GTP-C (v1 and v0) forward relocation request messages sent.	Int32
sgtpc-fwd-reloc-req-rx	Total GTP-C (v1 and v0) forward relocation request messages received.	Int32
sgtpc-fwd-reloc-discard-tx	This statistic has been obsoleted.	
sgtpc-fwd-reloc-req-accept-tx	Total GTP-C (v1 and v0) forward relocation request accept response messages sent.	Int32
sgtpc-fwd-reloc-req-accept-rx	Total GTP-C (v1 and v0) forward relocation request accept response messages received.	Int32
sgtpc-fwd-reloc-denied-tx	Total GTP-C (v1 and v0) forward relocation request denied response messages sent.	Int32
sgtpc-fwd-reloc-denied-rx	Total GTP-C (v1 and v0) forward relocation request denied response messages received.	Int32
sgtpc-fwd-smsctxt-req-tx	Total GTP-C (v1 and v0) forward relocation request messages with serving radio network subsystem (SRNS) context request sent.	Int32
sgtpc-fwd-smsctxt-req-rx	Total GTP-C (v1 and v0) forward relocation request messages with SRNS context request received.	Int32

Variables	Description	Data Type
sgtpc-fwd-smsctxt-discard-rx	This statistic has been obsoleted.	
sgtpc-fwd-smsctxt-ack-tx	Total GTP-C (v1 and v0) forward relocation request messages with SRNS context request acknowledge sent.	Int32
sgtpc-fwd-smsctxt-ack-rx	Total GTP-C (v1 and v0) forward relocation request messages with SRNS context request acknowledge received.	Int32
sgtpc-fwd-smsctxt-ack-denied-tx	Total GTP-C (v1 and v0) forward relocation request messages with SRNS context request denied sent.	Int32
sgtpc-fwd-smsctxt-ack-denied-rx	Total GTP-C (v1 and v0) forward relocation request messages with SRNS context request denied received.	Int32
sgtpc-fwd-reloc-compl-tx	Total GTP-C (v1 and v0) forward relocation request messages with procedure complete message sent.	Int32
sgtpc-fwd-reloc-compl-rx	Total GTP-C (v1 and v0) forward relocation request messages with procedure complete message received.	Int32
sgtpc-fwd-rel-compl-ack-accept-tx	Total GTP-C (v1 and v0) forward relocation request messages for procedure complete acknowledge sent.	Int32
sgtpc-fwd-rel-compl-ack-accept-rx	Total GTP-C (v1 and v0) forward relocation request messages for procedure complete acknowledge received.	Int32
sgtpc-fwd-rel-compl-ack-denied-tx	Total GTP-C (v1 and v0) forward relocation request messages for procedure complete sent with ACK denial.	Int32
sgtpc-fwd-rel-compl-ack-denied-rx	Total GTP-C (v1 and v0) forward relocation request messages for procedure complete received with ACK denial.	Int32
sgtpc-reloc-cncl-req-tx	Total GTP-C (v1 and v0) messages sent with relocation cancel request.	Int32
sgtpc-reloc-cncl-req-rx	Total GTP-C (v1 and v0) message response received for relocation cancel request.	Int32
sgtpc-reloc-cncl-req-accept-tx	Total GTP-C (v1 and v0) messages sent with acceptance for relocation cancel request.	Int32
sgtpc-reloc-cncl-req-accept-rx	Total GTP-C (v1 and v0) message response received with acceptance for relocation cancel request.	Int32
sgtpc-reloc-cncl-denied-tx	Total GTP-C (v1 and v0) messages sent with denial for relocation cancel request.	Int32
sgtpc-reloc-cncl-denied-rx	Total GTP-C (v1 and v0) message response with received with denial for relocation cancel request.	Int32
sgtpc-paket-discarded	Total GTP-C (v1 and v0) packets discarded.	Int32
sgtpc-v1-echo-req-tx	Total GTP-C v1 echo request messages sent.	Int32
sgtpc-v0-echo-req-tx	Total GTP-C v1 echo request messages sent.	Int32
sgtpc-v1-retnas-echo-req-tx	Total GTP-C v1 echo request messages retransmitted.	Int32

■ Common Syntax Options

Variables	Description	Data Type
sgtpc-v0-retrnas-echo-req-tx	Total GTP-C v0 echo request messages retransmitted.	Int32
sgtpc-v1-echo-req-rx	Total GTP-C v1 echo request messages received.	Int32
sgtpc-v0-echo-req-rx	Total GTP-C v0 echo request messages received.	Int32
sgtpc-ret-v1-echo-req-rx	Total GTP-C v1 echo request retransmitted messages received.	Int32
sgtpc-ret-v0-echo-req-rx	Total GTP-C v0 echo request retransmitted messages received.	Int32
sgtpc-v1-echo-rsp-tx	Total GTP-C v1 echo response messages sent.	Int32
sgtpc-v0-echo-rsp-tx	Total GTP-C v0 echo response messages sent.	Int32
sgtpc-v1-echo-rsp-rx	Total GTP-C v1 echo response messages received.	Int32
sgtpc-v0-echo-rsp-rx	Total GTP-C v0 echo response messages received.	Int32
sgtpc-ver-not-supported-rx	Total GTP-C messages of not supported version of GTP received.	Int32
sgtpc-ver-not-supported-tx	Total GTP-C messages of not supported version of GTP messages sent.	Int32
sgtpc-supp-extn-hdr-notif-rx	Total GTP messages with supported extension headers notification received.	Int32
sgtpc-supp-extn-hdr-notif-tx	Total GTP messages with supported extension headers notification sent.	Int32
sgtpu-ggsn-pkt-sent	Total packets for GTP-U messages sent to GGSN.	Int64
sgtpu-ggsn-byts-sent	Description: Total number of GTP-U messages bytes sent to GGSN at a given instance of time. Triggers: Changes every time an uplink packet is sent to the GGSN. Availability: Across all SGTP services, per SGTP service, per GGSN Type: Counter	Int64
sgtpu-mc-pkt-sent	Total packets for GTP-U messages sent to RNC.	Int64
sgtpu-mc-byts-sent	Description: Total number of bytes for GTP-U messages sent to the RNC at a given instance in time. Triggers: Changes every time a downlink packet is sent to the RNC. Availability: Across all SGTP services, per SGTP service, per RNC Type: Counter	Int64
sgtpu-sgsn-pkt-sent	Total packets for GTP-U messages sent to SGSN.	Int64
sgtpu-sgsn-byts-sent	Description: Total number of GTP-U message bytes sent to the peer SGSN at a given instance of time. Triggers: Changes every time a packet is sent to a “new” SGSN during an Inter SGSN handoff. Availability: Across all SGTP services, per SGTP service Type: Counter	Int64
sgtpu-ggsn-pkt-rcvd	Total packets for GTP-U messages received from GGSN.	Int64

Variables	Description	Data Type
sgtpu-ggsn-byts-rcvd	Description: Total number of GTP-U message bytes received from the GGSN at a given instance of time. Triggers: Changes every time a downlink packet is received from the GGSN. Availability: Across all SGTP services, per SGTP service, per GGSN Type: Counter	Int64
sgtpu-ggsn-pkt-queued	Total packets queued for GTP-U messages from GGSN.	Int64
sgtpu-ggsn-byts-queued	Total bytes queued for GTP-U messages from GGSN.	Int64
sgtpu-ggsn-pkt-forwarded	Description: This proprietary counter indicates the total number of packets that are forwarded from the GGSN queue. Triggers: Increments when a packet is forwarded from the GGSN queue. Availability: Per SGTP service Type: Counter	Int64
sgtpu-ggsn-byts-forwarded	Description: This proprietary counter indicates the total number of bytes that are forwarded from the GGSN queue. Triggers: Increments when a byte is forwarded from the GGSN queue. Availability: Per SGTP service Type: Counter	Int64
sgtpu-total-ggsn-pkt-drop	Total packets dropped for GTP-U messages from GGSN.	Int64
sgtpu-total-ggsn-byts-drop	Total bytes dropped for GTP-U messages from GGSN.	Int64
sgtpu-ggsn-pkt-queue-full	Total packets dropped due to queued buffer limit full for GTP-U messages from GGSN.	Int64
sgtpu-ggsn-byts-queue-full	Total bytes dropped due to queued buffer limit full for GTP-U messages from GGSN.	Int64
sgtpu-total-pkt-ctxt-preserved	Total number of GTP packets from GGSN dropped in preserved context.	Int64
sgtpu-total-byts-ctxt-preserved	Total number of GTP bytes from GGSN dropped in preserved with context.	Int64
sgtpu-ggsn-pkt-unkwn-sess	Total number of GTP packets from GGSN dropped in unknown session.	Int64
sgtpu-ggsn-byts-unkwn-sess	Total number of GTP bytes from GGSN dropped in unknown session.	Int64
sgtpu-ggsn-pkt-drop-suspend-dealloc-st	Total number of GTP packets from GGSN dropped due to session de-allocation state was in suspended state.	Int64
sgtpu-ggsn-byts-drop-suspend-dealloc-st	Total number of GTP bytes from GGSN dropped due to session de-allocation state was in suspended state.	Int64
sgtpu-ggsn-pkt-page-fail	Total number of GTP packets dropped due to paging failure when there was downlink data from GGSN.	Int64

■ Common Syntax Options

Variables	Description	Data Type
sgtpu-ggsn-byts-page-fail	Total number of GTP bytes dropped due to paging failure when there was downlink data from GGSN.	Int64
sgtpu-ggsn-pkt-v0-seq-num-nt-pres	Total number of packets from GGSN dropped as GTP-Uv0 messages received with sequence number flag set to false.	Int64
sgtpu-ggsn-byts-v0-seq-num-nt-pres	Total number of bytes from GGSN dropped as GTP-Uv0 messages received with sequence number flag set to false.	Int64
sgtpu-ggsn-pkt-unknown-version	Total number of GTP-U packets received from GGSN with unknown GTP version.	Int64
sgtpu-ggsn-byts-unknown-version	Total number of GTP-U bytes received from GGSN with unknown GTP version.	Int64
sgtpu-ggsn-pkt-invalid-msg-length	Total number of GTP packets from GGSN dropped as GTP-U messages received with invalid message length.	Int64
sgtpu-ggsn-byts-invalid-msg-length	Total number of GTP bytes from GGSN dropped due to GTP-U messages received with invalid message length.	Int64
sgtpu-ggsn-pkt-traffic-policing	Total number of GTP-U packets received from GGSN under subscriber traffic policing support.	Int64
sgtpu-ggsn-byts-traffic-policing	Total number of GTP-U bytes received from GGSN under subscriber traffic policing support.	Int64
sgtpu-ggsn-pkt-iu-release	Description: Total number of downlink packets that were queued but dropped due to IU/RAB release. Triggers: Counter at the new SGSN increments when Iu/RAB gets released while inter-SGSN-RAU is in progress and downlink data is queued during RAU. Availability: Per SGTP service Type: Counter	Int64
sgtpu-ggsn-byts-iu-release	Description: Total number of downlink bytes that were queued but dropped due to IU/RAB release. Triggers: Counter at the new SGSN increments when Iu/RAB gets released while inter-SGSN-RAU is in progress and downlink data is queued during RAU. Availability: per SGTP service Type: Counter	Int64
sgtpu-ggsn-pkt-t3-tmr-expiry	Description: Total number of downlink packets that were queued but dropped due to T3-tunnel timer expiry during inter-SGSN RAU procedure. Triggers: During inter-SGSN RAU at the old SGSN, neither Cancel Location or SGSN Context Ack are received when t3-tunnel timer is fired causing the RAU procedure to abort. If old RABs are not available, the data queued during the RAU will be dropped. Availability: per SGTP service Type: Counter	Int64
sgtpu-ggsn-byts-t3-tmr-expiry	Description: Total number of downlink bytes that were queued but dropped due to T3-tunnel timer expiry during inter-SGSN RAU procedure. Triggers: During inter-SGSN RAU at the old SGSN, neither Cancel Location or SGSN Context Ack are received when t3-tunnel timer is fired causing the RAU procedure to abort. If old RABs are not available, the data queued during the RAU will be dropped. Availability: per SGTP service Type: Counter	Int64

Variables	Description	Data Type
sgtpu-ggsn-pkt-bvc-block	Description: This proprietary counter indicates the total number of packets that are dropped from the GGSN queue, because of BVC Block or BVC Reset messages received for the MM context. Triggers: Increments when a packet is dropped from the GGSN queue because of BVC Reset/BVC Block received for the MM context. Availability: per SGTP service Type: Counter	Int64
sgtpu-ggsn-byts-bvc-block	Description: This proprietary counter indicates the total number of bytes that are dropped from the GGSN queue, because of BVC Block or BVC Reset messages received for the MM context. Triggers: Increments when a byte is dropped from the GGSN queue because of BVC Reset/BVC Block received for the MM context. Availability: per SGTP service Type: Counter	Int64
sgtpu-rnc-pkt-rcvd	Total packets for GTP-U messages received from RNC.	Int64
sgtpu-rnc-byts-rcvd	Description: Total number of GTP-U messages bytes received from the RNC at a given instance of time. Triggers: Increments when SGSN receives an uplink packet from an RNC. Availability: Across all SGTP services, per SGTP service, per RNC Type: Counter	Int64
sgtpu-rnc-pkt-queued	Total packets queued for GTP-U messages from RNC.	Int64
sgtpu-rnc-byts-queued	Total bytes queued for GTP-U messages from RNC.	Int64
sgtpu-total-rnc-pkt-drop	Total packets dropped for GTP-U messages from RNC.	Int64
sgtpu-total-rnc-byts-drop	Total bytes dropped for GTP-U messages from RNC.	Int64
sgtpu-rnc-pkt-queue-full	Total packets dropped due to queued buffer limit full for GTP-U messages from RNC.	Int64
sgtpu-rnc-byts-queue-full	Total bytes dropped due to queued buffer limit full for GTP-U messages from RNC.	Int64
sgtpu-rnc-pkt-unkwn-sess	Total number of GTP packets from RNC dropped in unknown session.	Int64
sgtpu-rnc-byts-unkwn-sess	Total number of GTP bytes from RNC dropped in unknown session.	Int64
sgtpu-rnc-pkt-rau-in-active-reg-st	Total number of GTP packets from RNC dropped due to routing area update procedure in active registration state.	Int64
sgtpu-rnc-byts-rau-in-active-reg-st	Total number of GTP bytes from RNC dropped due to routing area update procedure in active registration state.	Int64
sgtpu-rnc-pkt-drop-suspended-dealloc-st	Total number of GTP packets from RNC dropped due to session de-allocation state was in suspended state.	Int64
sgtpu-rnc-byts-drop-suspended-dealloc-st	Total number of GTP bytes from RNC dropped due to session de-allocation state was in suspended state.	Int64

■ Common Syntax Options

Variables	Description	Data Type
sgtpu-mc-pkt-unknown-version	Total number of GTP-U packets received from RNC with unknown GTP version.	Int64
sgtpu-mc-byts-unknown-version	Total number of GTP-U bytes received from RNC for packets with unknown GTP version.	Int64
sgtpu-mc-pkt-invalid-msg-length	Total number of GTP packets from RNC dropped due to GTP-Uv0 messages received with invalid message length.	Int64
sgtpu-mc-byts-invalid-msg-length	Total number of GTP bytes from RNC dropped due to TP-Uv0 messages received with invalid message length.	Int64
sgtpu-mc-pkt-source-ip-viol	Total number of GTP packets from RNC dropped as received GTP-Uv0 message shows source IP violation.	Int64
sgtpu-mc-byts-source-ip-viol	Total number of GTP bytes from RNC dropped as received GTP-Uv0 message shows source IP violation.	Int64
sgtpu-mc-pkt-traffic-policing	Total number of GTP-U packets received from RNC under subscriber traffic policing support.	Int64
sgtpu-mc-byts-traffic-policing	Total number of GTP-U bytes received from RNC under subscriber traffic policing support.	Int64
sgtpu-sgsn-pkt-rcvd	Total packets for GTP-U messages received from peer SGSN.	Int64
sgtpu-sgsn-byts-rcvd	Total bytes for GTP-U messages received from peer SGSN.	Int64
sgtpu-sgsn-pkt-queued	Total packets queued for GTP-U messages from peer SGSN.	Int64
sgtpu-sgsn-byts-queued	Total bytes queued for GTP-U messages from peer SGSN.	Int64
sgtpu-total-sgsn-pkt-drop	Total packets dropped for GTP-U messages from peer SGSN.	Int64
sgtpu-total-sgsn-byts-drop	Total bytes dropped for GTP-U messages from peer SGSN.	Int64
sgtpu-sgsn-pkt-queue-full	Total packets dropped due to queued buffer limit full for GTP-U messages from peer SGSN.	Int64
sgtpu-sgsn-byts-queue-full	Total bytes dropped due to queued buffer limit full for GTP-U messages from peer SGSN.	Int64
sgtpu-sgsn-pkt-unkwn-sess	Total number of GTP packets from peer SGSN dropped in unknown session.	Int64
sgtpu-sgsn-byts-unkwn-sess	Total number of GTP bytes from peer SGSN dropped in unknown session.	Int64
sgtpu-sgsn-pkt-iu-release	Total number of GTP packets from peer SGSN received with Iu release message.	Int64
sgtpu-sgsn-byts-iu-release	Total number of GTP bytes from peer SGSN received with Iu release message.	Int64

Variables	Description	Data Type
sgtpu-sgsn-pkt-inconsistent-tunnel-state	Total number of GTP packets from peer SGSN received during inconsistent tunnel state.	Int64
sgtpu-sgsn-byts-inconsistent-tunnel-state	Total number of GTP bytes from peer SGSN received during inconsistent tunnel state.	Int64
sgtpu-sgsn-pkt-sess-dealloc	Total number of GTP packets from peer SGSN received during session deallocation procedure.	Int64
sgtpu-sgsn-byts-sess-dealloc	Total number of GTP bytes from peer SGSN received during session deallocation procedure.	Int64
sgtpu-sgsn-pkt-unknown-version	Total number of GTP-U packets received from peer SGSN with unknown GTP version.	Int64
sgtpu-sgsn-byts-unknown-version	Total number of GTP-U bytes received from peer SGSN with unknown GTP version.	Int64
sgtpu-sgsn-pkt-invalid-msg-length	Total number of GTP packets from peer SGSN received with invalid message length.	Int64
sgtpu-sgsn-byts-invalid-msg-length	Total number of GTP bytes from peer SGSN received with invalid message length.	Int64
sgtpu-echo-req-tx	Total number of GTP-U echo request messages sent.	Int32
sgtpu-echo-req-rx	Total number of GTP-U echo request messages received.	Int32
sgtpu-echo-rsp-tx	Total number of GTP-U echo response messages sent.	Int32
sgtpu-echo-rsp-rx	Total number of GTP-U echo response messages received.	Int32
sgtpu-v1-echo-req-tx	Total GTP-Uv1 echo request messages sent.	Int32
sgtpu-v0-echo-req-tx	Total GTP-Uv0 echo request messages sent.	Int32
sgtpu-v1-echo-req-rx	Total GTP-Uv1 echo request messages received.	Int32
sgtpu-v0-echo-req-rx	Total GTP-Uv0 echo request messages received.	Int32
sgtpu-v1-echo-rsp-tx	Total GTP-Uv1 echo request response messages sent.	Int32
sgtpu-v0-echo-rsp-tx	Total GTP-Uv0 echo request response messages sent.	Int32
sgtpu-v1-echo-rsp-rx	Total GTP-Uv1 echo request response messages received.	Int32
sgtpu-v0-echo-rsp-rx	Total GTP-Uv0 echo request response messages received.	Int32
sgtpu-v1-echo-req-retrans	Total GTP-Uv1 echo request response messages retransmitted.	Int32
sgtpu-v0-echo-req-retrans	Total GTP-Uv0 echo request response messages retransmitted.	Int32
sgtpu-ggsn-errind-sent	Total GTP-U (v1 and v0) messages sent to GGSN with error indication.	Int32
sgtpu-ggsn-errind-revd	Total GTP-U (v1 and v0) messages received from GGSN with error indication.	Int32

Variables	Description	Data Type
sgtpu-mc-errind-sent	Total GTP-U (v1 and v0) messages sent to RNC with error indication.	Int32
sgtpu-mc-errind-rcvd	Total GTP-U (v1 and v0) messages received from RNC with error indication.	Int32
sgtpu-sgsn-unknown-errind	Total GTP-U (v1 and v0) messages sent to peer SGSN with unknown error indication.	Int32
sgtpu-sgsn-unsolicited-data-pkt	Total GTP-U (v1 and v0) messages received with unsolicited datapackets in GTP-U messages.	Int32
sgtpu-sgsn-err-ind-for-unsolicited-pkt	Total GTP-U (v1 and v0) messages received with error indication for unsolicited data packets in GTP-U messages.	Int32
sgtpu-total-active-ggsn	Total active GGSN nodes. This statistic value is of Gauge.	Int32
sgtpu-total-active-mc	Total active RNC nodes. This statistic value is of Gauge.	Int32
sgtpu-errors-payload-length-mismatch	Description: Total number of “invalid” packets received from GGSN or RNC with errors due to mismatch in payload length. Triggers: Increments when received GTP-U (v1 and v0) header does not match with the actual payload length field. Availability: Across all SGTP services, per SGTP service Type: Counter	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 63

S-GW Node Level Schema Statistics

The S-GW schema provides operational statistics that can be used for monitoring and troubleshooting the following products: S-GW

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 63. Bulk Statistic Variables in the S-GW Node Level Schema

Variables	Description	Data Type
vpnname	The name of the context configured on the system that is currently facilitating the S-GW service. This is a key variable. Type: Information	String

■ Common Syntax Options

Variables	Description	Data Type
vpnid	The identification number of the context configured on the system that is currently facilitating the S-GW service. This is an internal reference number. This is a key variable. Type: Information	Int32
servname	Displays the name of the S-GW service for which the statistics are displayed. This is a key variable. Type: Information	String
servid	The identification number of the service configured on the system that is currently facilitating the S-GW service. This is an internal reference number. This is a key variable. Type: Information	Int32
sess-cur	The total number of sessions currently established on this system. Type: Gauge	Int32
sessstat-totcur-ueidle	Session Statistics - Total Current - UE Idle Type: Gauge	Int32
sessstat-totcur-ueactive	Session Statistics - Total Current - UE Active Type: Gauge	Int32
sessstat-totcur-pdn	Session Statistics - Total Current - PDN Type: Gauge	Int32
sessstat-totcur-bearers	Session Statistics - Total Current - Bearers Type: Gauge	Int32
sessstat-totsetup-ue	Session Statistics - Total Setup - UE Type: Counter	Int32
sessstat-totsetup-pdn	Session Statistics - Total Setup - PDN Type: Counter	Int32
sessstat-totsetup-bearers	Session Statistics - Total Setup - Bearers Type: Counter	Int32
sessstat-pdnsetuptype-ipv4	Session Statistics - Total PDNs Setup Per PDN-type - IPv4 Type: Counter	Int32
sessstat-pdnsetuptype-ipv6	Session Statistics - Total PDNs Setup Per PDN-type - IPv6 Type: Counter	Int32
sessstat-pdnsetuptype-ipv4v6	Session Statistics - Total PDNs Setup Per PDN-type - IPv4v6 Type: Counter	Int32
sessstat-pdnsetupiniface-s11	Session Statistics - Total PDNs Setup Per Interface - S11 Type: Counter	Int32
sessstat-pdnsetupiniface-s4	Session Statistics - Total PDNs Setup Per Interface - S4 Type: Counter	Int32
sessstat-pdnsetup5proto-gtp	Session Statistics - Total PDNs Setup Per S5 Proto - GTP Type: Counter	Int32

Variables	Description	Data Type
sessstat-pdnsetups5proto-pmip	Session Statistics - Total PDNs Setup Per S5 Proto - PMIP Type: Counter	Int32
sessstat-pdnrel-ipv4	Session Statistics - Total PDNs Released - IPv4 Type: Counter	Int32
sessstat-pdnrel-ipv6	Session Statistics - Total PDNs Released - IPv6 Type: Counter	Int32
sessstat-pdnrel-ipv4v6	Session Statistics - Total PDNs Released - IPv4v6 Type: Counter	Int32
sessstat-pdnrelrsn-mme	Session Statistics - Total PDNs Released reason - MME Initiated Type: Counter	Int32
sessstat-pdnrelrsn-pgw	Session Statistics - Total PDNs Released reason - PGW Initiated Type: Counter	Int32
sessstat-pdnrelrsn-pcrf	Session Statistics - Total PDNs Released reason - PCRF Initiated Type: Counter	Int32
sessstat-pdnrelrsn-local	Session Statistics - Total PDNs Released reason - Local Type: Counter	Int32
sessstat-pdnrelrsn-s1err	Session Statistics - Total PDNs Released reason - S1 Error Ind Type: Counter	Int32
sessstat-pdnrelrsn-s5err	Session Statistics - Total PDNs Released reason - S5 Error Ind Type: Counter	Int32
sessstat-pdnrelrsn-s4err	Session Statistics - Total PDNs Released reason - S4 Error Ind Type: Counter	Int32
sessstat-pdnrelrsn-s12err	Session Statistics - Total PDNs Released reason - S12 Error Ind Type: Counter	Int32
sessstat-pdnrelrsn-path fail-S11	Session Statistics - Total PDNs Released reason - S11 Path Failure Type: Counter	Int32
sessstat-pdnrelrsn-path fail-S5	Session Statistics - Total PDNs Released reason - S5 Path Failure Type: Counter	Int32
sessstat-pdnrelrsn-path fail-S5-u	Session Statistics - Total PDNs Released reason - Path Failure S5-U Type: Counter	Int32
sessstat-pdnrelrsn-path fail-S1-u	Session Statistics - Total PDNs Released reason - Path Failure S1-U Type: Counter	Int32
sessstat-pdnrelrsn-path fail-S4	Session Statistics - Total PDNs Released reason - Path Failure S4 Type: Counter	Int32
sessstat-pdnrelrsn-path fail-S12	Session Statistics - Total PDNs Released reason - Path Failure S12 Type: Counter	Int32
sessstat-pdnrelrsn-path fail-S4-u	Session Statistics - Total PDNs Released reason - Path Failure S4-U Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
sessstat-pdnrelrsn-other	Session Statistics - Total PDNs Released reason - Other Type: Counter	Int32
sessstat-pdnrej-ipv4	Session Statistics - Total PDNs Rejected - IPv4 Type: Counter	Int32
sessstat-pdnrej-ipv6	Session Statistics - Total PDNs Rejected - IPv6 Type: Counter	Int32
sessstat-pdnrej-ipv4v6	Session Statistics - Total PDNs Rejected - IPv4v6 Type: Counter	Int32
sessstat-pdnrejsrn-pgw	Session Statistics - Total PDNs Rejected Reason - PGW Reject Type: Counter	Int32
sessstat-pdnrejsrn-license	Session Statistics - Total PDNs Rejected Reason - License Type: Counter	Int32
sessstat-pdnrejsrn-newcall-policy	Session Statistics - Total PDNs Rejected Reason - Newcall Policy Type: Counter	Int32
sessstat-pdnrejsrn-overload	Session Statistics - Total PDNs Rejected Reason - Overload Type: Counter	Int32
sessstat-pdnrejsrn-cong	Session Statistics - Total PDNs Rejected Reason - Congestion Type: Counter	Int32
sessstat-pdnrejsrn-other	Session Statistics - Total PDNs Rejected Reason - Other Type: Counter	Int32
totepsbearsetup-qci1	Total EPS Bearers Setup - QCI 1 Type: Counter	Int32
totepsbearsetup-qci2	Total EPS Bearers Setup - QCI 2 Type: Counter	Int32
totepsbearsetup-qci3	Total EPS Bearers Setup - QCI 3 Type: Counter	Int32
totepsbearsetup-qci4	Total EPS Bearers Setup - QCI 4 Type: Counter	Int32
totepsbearsetup-qci5	Total EPS Bearers Setup - QCI 5 Type: Counter	Int32
totepsbearsetup-qci6	Total EPS Bearers Setup - QCI 6 Type: Counter	Int32
totepsbearsetup-qci7	Total EPS Bearers Setup - QCI 7 Type: Counter	Int32
totepsbearsetup-qci8	Total EPS Bearers Setup - QCI 8 Type: Counter	Int32
totepsbearsetup-qci9	Total EPS Bearers Setup - QCI 9 Type: Counter	Int32

Variables	Description	Data Type
totepsbearsetup-other	Total EPS Bearers Setup - Other Type: Counter	Int32
totepsbearmod	Total EPS Bearers Modified Type: Counter	Int32
totepsbearrel-qci1	Total EPS Bearers Released - QCI 1 Type: Counter	Int32
totepsbearrel-qci2	Total EPS Bearers Released - QCI 2 Type: Counter	Int32
totepsbearrel-qci3	Total EPS Bearers Released - QCI 3 Type: Counter	Int32
totepsbearrel-qci4	Total EPS Bearers Released - QCI 4 Type: Counter	Int32
totepsbearrel-qci5	Total EPS Bearers Released - QCI 5 Type: Counter	Int32
totepsbearrel-qci6	Total EPS Bearers Released - QCI 6 Type: Counter	Int32
totepsbearrel-qci7	Total EPS Bearers Released - QCI 7 Type: Counter	Int32
totepsbearrel-qci8	Total EPS Bearers Released - QCI 8 Type: Counter	Int32
totepsbearrel-qci9	Total EPS Bearers Released - QCI 9 Type: Counter	Int32
totepsbearrel-other	Total EPS Bearers Released - Other Type: Counter	Int32
totepsbearmod-qci1	Total EPS Bearers Modified - QCI 1 Type: Counter	Int32
totepsbearmod-qci2	Total EPS Bearers Modified - QCI 2 Type: Counter	Int32
totepsbearmod-qci3	Total EPS Bearers Modified - QCI 3 Type: Counter	Int32
totepsbearmod-qci4	Total EPS Bearers Modified - QCI 4 Type: Counter	Int32
totepsbearmod-qci5	Total EPS Bearers Modified - QCI 5 Type: Counter	Int32
totepsbearmod-qci6	Total EPS Bearers Modified - QCI 6 Type: Counter	Int32
totepsbearmod-qci7	Total EPS Bearers Modified - QCI 7 Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
totepsbearmod-qci8	Total EPS Bearers Modified - QCI8 Type: Counter	Int32
totepsbearmod-qci9	Total EPS Bearers Modified - QCI9 Type: Counter	Int32
totepsbearmod-other	Total EPS Bearers Modified - Other Type: Counter	Int32
totepsbearrel-dedrsn-pgw	Total EPS Bearers Released - Dedicated Bearers Released Reason - PGW Ini Type: Counter	Int32
totepsbearrel-dedrsn-pcrf	Total EPS Bearers Released - Dedicated Bearers Released Reason - PCRF Ini Type: Counter	Int32
totepsbearrel-dedrsn-s1err	Total EPS Bearers Released - Dedicated Bearers Released Reason - S1 Error Ind Type: Counter	Int32
totepsbearrel-dedrsn-s5err	Total EPS Bearers Released - Dedicated Bearers Released Reason - S5 Error Ind Type: Counter	Int32
totepsbearrel-dedrsn-s4err	Total EPS Bearers Released - Dedicated Bearers Released Reason - S4 Error Ind Type: Counter	Int32
totepsbearrel-dedrsn-s12err	Total EPS Bearers Released - Dedicated Bearers Released Reason - S12 Error Ind Type: Counter	Int32
totepsbearrel-dedrsn-local	Total EPS Bearers Released - Dedicated Bearers Released Reason - Local Type: Counter	Int32
totepsbearrel-dedrsn-pdn	Total EPS Bearers Released - Dedicated Bearers Released Reason - PDN Down Type: Counter	Int32
totepsbearrel-dedrsn-path fail-s1-u	Total EPS Bearers Released - Total Dedicated Bearers Released Reason - Path Failure S1-U Type: Counter	Int32
totepsbearrel-dedrsn-path fail-s5-u	Total EPS Bearers Released - Total Dedicated Bearers Released Reason - Path Failure S5-U Type: Counter	Int32
totepsbearrel-dedrsn-path fail-s12	Total EPS Bearers Released - Total Dedicated Bearers Released Reason - Path Failure S12 Type: Counter	Int32
totepsbearrel-dedrsn-path fail-s4-u	Total EPS Bearers Released - Total Dedicated Bearers Released Reason - Path Failure S4-U Type: Counter	Int32
totepsbearrel-dedrsn-other	Total EPS Bearers Released - Dedicated Bearers Released Reason - Other Type: Counter	Int32
datastat-uplink-qci1totbyte	Data Statistics - Uplink Stats - QCI1 Total-Bytes Type: Counter	Int64
datastat-uplink-qci1totpkt	Data Statistics - Uplink Stats - QCI1 Total-Packets Type: Counter	Int64

Variables	Description	Data Type
datastat-uplink-qci2totbyte	Data Statistics - Uplink Stats - QCI 2 Total-Bytes Type: Counter	Int64
datastat-uplink-qci2totpkt	Data Statistics - Uplink Stats - QCI 2 Total-Packets Type: Counter	Int64
datastat-uplink-qci3totbyte	Data Statistics - Uplink Stats - QCI 3 Total-Bytes Type: Counter	Int64
datastat-uplink-qci3totpkt	Data Statistics - Uplink Stats - QCI 3 Total-Packets Type: Counter	Int64
datastat-uplink-qci4totbyte	Data Statistics - Uplink Stats - QCI 4 Total-Bytes Type: Counter	Int64
datastat-uplink-qci4totpkt	Data Statistics - Uplink Stats - QCI 4 Total-Packets Type: Counter	Int64
datastat-uplink-qci5totbyte	Data Statistics - Uplink Stats - QCI 5 Total-Bytes Type: Counter	Int64
datastat-uplink-qci5totpkt	Data Statistics - Uplink Stats - QCI 5 Total-Packets Type: Counter	Int64
datastat-uplink-qci6totbyte	Data Statistics - Uplink Stats - QCI 6 Total-Bytes Type: Counter	Int64
datastat-uplink-qci6totpkt	Data Statistics - Uplink Stats - QCI 6 Total-Packets Type: Counter	Int64
datastat-uplink-qci7totbyte	Data Statistics - Uplink Stats - QCI 7 Total-Bytes Type: Counter	Int64
datastat-uplink-qci7totpkt	Data Statistics - Uplink Stats - QCI 7 Total-Packets Type: Counter	Int64
datastat-uplink-qci8totbyte	Data Statistics - Uplink Stats - QCI 8 Total-Bytes Type: Counter	Int64
datastat-uplink-qci8totpkt	Data Statistics - Uplink Stats - QCI 8 Total-Packets Type: Counter	Int64
datastat-uplink-qci9totbyte	Data Statistics - Uplink Stats - QCI 9 Total-Bytes Type: Counter	Int64
datastat-uplink-qci9totpkt	Data Statistics - Uplink Stats - QCI 9 Total-Packets Type: Counter	Int64
datastat-uplink-othertotbyte	Data Statistics - Uplink Stats - Other Total-Bytes Type: Counter	Int64
datastat-uplink-othertotpkt	Data Statistics - Uplink Stats - Other Total-Packets Type: Counter	Int64
datastat-uplink-dropstat-qci1totbyte	Data Statistics - Uplink Bytes Dropped - QCI 1 Total-Bytes Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
datastat-uplink-dropstat-qci1totpkt	Data Statistics - Uplink Packets Dropped - QCI 1 Total-Packets Type: Counter	Int32
datastat-uplink-dropstat-qci2totbyte	Data Statistics - Uplink Bytes Dropped - QCI2 Total-Bytes Type: Counter	Int32
datastat-uplink-dropstat-qci2totpkt	Data Statistics - Uplink Packets Dropped - QCI2 Total-Packets Type: Counter	Int32
datastat-uplink-dropstat-qci3totbyte	Data Statistics - Uplink Bytes Dropped - QCI3 Total-Bytes Type: Counter	Int32
datastat-uplink-dropstat-qci3totpkt	Data Statistics - Uplink Packets Dropped - QCI3 Total-Packets Type: Counter	Int32
datastat-uplink-dropstat-qci4totbyte	Data Statistics - Uplink Bytes Dropped - QCI4 Total-Bytes Type: Counter	Int32
datastat-uplink-dropstat-qci4totpkt	Data Statistics - Uplink Packets Dropped - QCI4 Total-Packets Type: Counter	Int32
datastat-uplink-dropstat-qci5totbyte	Data Statistics - Uplink Bytes Dropped - QCI5 Total-Bytes Type: Counter	Int32
datastat-uplink-dropstat-qci5totpkt	Data Statistics - Uplink Packets Dropped - QCI5 Total-Packets Type: Counter	Int32
datastat-uplink-dropstat-qci6totbyte	Data Statistics - Uplink Bytes Dropped - QCI6 Total-Bytes Type: Counter	Int32
datastat-uplink-dropstat-qci6totpkt	Data Statistics - Uplink Packets Dropped - QCI6 Total-Packets Type: Counter	Int32
datastat-uplink-dropstat-qci7totbyte	Data Statistics - Uplink Bytes Dropped - QCI7 Total-Bytes Type: Counter	Int32
datastat-uplink-dropstat-qci7totpkt	Data Statistics - Uplink Packets Dropped - QCI7 Total-Packets Type: Counter	Int32
datastat-uplink-dropstat-qci8totbyte	Data Statistics - Uplink Bytes Dropped - QCI8 Total-Bytes Type: Counter	Int32
datastat-uplink-dropstat-qci8totpkt	Data Statistics - Uplink Packets Dropped - QCI8 Total-Packets Type: Counter	Int32
datastat-uplink-dropstat-qci9totbyte	Data Statistics - Uplink Bytes Dropped - QCI9 Total-Bytes Type: Counter	Int32
datastat-uplink-dropstat-qci9totpkt	Data Statistics - Uplink Packets Dropped - QCI9 Total-Packets Type: Counter	Int32
datastat-uplink-dropstat-othertotbyte	Data Statistics - Uplink Bytes Dropped - Other Total-Bytes Type: Counter	Int32
datastat-uplink-dropstat-othertotpkt	Data Statistics - Uplink Packets Dropped - Other Total-Packets Type: Counter	Int32

Variables	Description	Data Type
datastat-downlink-qci1totbyte	Data Statistics - Downlink Stats - QCI1 Total-Bytes Type: Counter	Int64
datastat-downlink-qci1totpkt	Data Statistics - Downlink Stats - QCI1 Total-Packets Type: Counter	Int64
datastat-downlink-qci2totbyte	Data Statistics - Downlink Stats - QCI2 Total-Bytes Type: Counter	Int64
datastat-downlink-qci2totpkt	Data Statistics - Downlink Stats - QCI2 Total-Packets Type: Counter	Int64
datastat-downlink-qci3totbyte	Data Statistics - Downlink Stats - QCI3 Total-Bytes Type: Counter	Int64
datastat-downlink-qci3totpkt	Data Statistics - Downlink Stats - QCI3 Total-Packets Type: Counter	Int64
datastat-downlink-qci4totbyte	Data Statistics - Downlink Stats - QCI4 Total-Bytes Type: Counter	Int64
datastat-downlink-qci4totpkt	Data Statistics - Downlink Stats - QCI4 Total-Packets Type: Counter	Int64
datastat-downlink-qci5totbyte	Data Statistics - Downlink Stats - QCI5 Total-Bytes Type: Counter	Int64
datastat-downlink-qci5totpkt	Data Statistics - Downlink Stats - QCI5 Total-Packets Type: Counter	Int64
datastat-downlink-qci6totbyte	Data Statistics - Downlink Stats - QCI6 Total-Bytes Type: Counter	Int64
datastat-downlink-qci6totpkt	Data Statistics - Downlink Stats - QCI6 Total-Packets Type: Counter	Int64
datastat-downlink-qci7totbyte	Data Statistics - Downlink Stats - QCI7 Total-Bytes Type: Counter	Int64
datastat-downlink-qci7totpkt	Data Statistics - Downlink Stats - QCI7 Total-Packets Type: Counter	Int64
datastat-downlink-qci8totbyte	Data Statistics - Downlink Stats - QCI8 Total-Bytes Type: Counter	Int64
datastat-downlink-qci8totpkt	Data Statistics - Downlink Stats - QCI8 Total-Packets Type: Counter	Int64
datastat-downlink-qci9totbyte	Data Statistics - Downlink Stats - QCI9 Total-Bytes Type: Counter	Int64
datastat-downlink-qci9totpkt	Data Statistics - Downlink Stats - QCI9 Total-Packets Type: Counter	Int64
datastat-downlink-othertotbyte	Data Statistics - Downlink Stats - Other Total-Bytes Type: Counter	Int64

■ Common Syntax Options

Variables	Description	Data Type
datastat-downlink-othertotpkt	Data Statistics - Downlink Stats - Other Total-Packets Type: Counter	Int64
datastat-downlink-dropstat-qci1totbyte	Data Statistics - Downlink Bytes Dropped - QCI 1 Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-qci1totpkt	Data Statistics - Downlink Packets Dropped - QCI 1 Total-Packets Type: Counter	Int32
datastat-downlink-dropstat-qci2totbyte	Data Statistics - Downlink Bytes Dropped - QCI 2 Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-qci2totpkt	Data Statistics - Downlink Packets Dropped - QCI 2 Total-Packets Type: Counter	Int32
datastat-downlink-dropstat-qci3totbyte	Data Statistics - Downlink Bytes Dropped - QCI 3 Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-qci3totpkt	Data Statistics - Downlink Packets Dropped - QCI 3 Total-Packets Type: Counter	Int32
datastat-downlink-dropstat-qci4totbyte	Data Statistics - Downlink Bytes Dropped - QCI 4 Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-qci4totpkt	Data Statistics - Downlink Packets Dropped - QCI 4 Total-Packets Type: Counter	Int32
datastat-downlink-dropstat-qci5totbyte	Data Statistics - Downlink Bytes Dropped - QCI 5 Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-qci5totpkt	Data Statistics - Downlink Packets Dropped - QCI 5 Total-Packets Type: Counter	Int32
datastat-downlink-dropstat-qci6totbyte	Data Statistics - Downlink Bytes Dropped - QCI 6 Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-qci6totpkt	Data Statistics - Downlink Packets Dropped - QCI 6 Total-Packets Type: Counter	Int32
datastat-downlink-dropstat-qci7totbyte	Data Statistics - Downlink Bytes Dropped - QCI 7 Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-qci7totpkt	Data Statistics - Downlink Packets Dropped - QCI 7 Total-Packets Type: Counter	Int32
datastat-downlink-dropstat-qci8totbyte	Data Statistics - Downlink Bytes Dropped - QCI 8 Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-qci8totpkt	Data Statistics - Downlink Packets Dropped - QCI 8 Total-Packets Type: Counter	Int32
datastat-downlink-dropstat-qci9totbyte	Data Statistics - Downlink Bytes Dropped - QCI 9 Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-qci9totpkt	Data Statistics - Downlink Packets Dropped - QCI 9 Total-Packets Type: Counter	Int32

Variables	Description	Data Type
datastat-downlink-dropstat-othertotbyte	Data Statistics - Downlink Bytes Dropped - Other Total-Bytes Type: Counter	Int32
datastat-downlink-dropstat-othertotpkt	Data Statistics - Downlink Packets Dropped - Other Total-Packets Type: Counter	Int32
intersgwhaovstat-pdnin-x2	Inter-SGW Handover Statistics - Total PDNs Incoming - X2 based Type: Counter	Int32
intersgwhaovstat-pdnin-x2-success	Inter-SGW Handover Statistics - Total PDNs Incoming - X2 based - success Type: Counter	Int32
intersgwhaovstat-pdnin-x2-fail	Inter-SGW Handover Statistics - Total PDNs Incoming - X2 based - failure Type: Counter	Int32
intersgwhaovstat-pdnin-idletau	Inter-SGW Handover Statistics - Total PDNs Incoming - Idle-mode TAU Type: Counter	Int32
intersgwhaovstat-pdnin-idletau-success	Inter-SGW Handover Statistics - Total PDNs Incoming - Idle-mode TAU - success Type: Counter	Int32
intersgwhaovstat-pdnin-idletau-fail	Inter-SGW Handover Statistics - Total PDNs Incoming - Idle-mode TAU - failure Type: Counter	Int32
intersgwhaovstat-pdnin-s1	Inter-SGW Handover Statistics - Total PDNs Incoming - S1 Based Type: Counter	Int32
intersgwhaovstat-pdnin-s1-success	Inter-SGW Handover Statistics - Total PDNs Incoming - S1 Based - success Type: Counter	Int32
intersgwhaovstat-pdnin-s1-fail	Inter-SGW Handover Statistics - Total PDNs Incoming - S1 Based - failure Type: Counter	Int32
intersgwhaovstat-pdnout	Inter-SGW Handover Statistics - Total PDNs Outgoing Type: Counter	Int32
intersgwhaovstat-intersystem	Intra-SGW Handover Stats - Inter-system Type: Counter	Int32
intersgwhaovstat-intersystem-success	Intra-SGW Handover Stats - Inter-system - success Type: Counter	Int32
intersgwhaovstat-intersystem-fail	Intra-SGW Handover Stats - Inter-system - failure Type: Counter	Int32
intrasgwhaovstat-intramme	Intra-SGW Handover Stats - Intra-MME Type: Counter	Int32
intrasgwhaovstat-intramme-success	Intra-SGW Handover Stats - Intra-MME - success Type: Counter	Int32
intrasgwhaovstat-intramme-fail	Intra-SGW Handover Stats - Intra-MME - failure Type: Counter	Int32
intrasgwhaovstat-intermme	Intra-SGW Handover Stats - Inter-MME Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
intrasgwhaovstat-intermme-success	Intra-SGW Handover Stats - Inter-MME - success Type: Counter	Int32
intrasgwhaovstat-intermme-fail	Intra-SGW Handover Stats - Inter-MME - failure Type: Counter	Int32
intrasgwhaovstat-intrasgsn	Intra-SGW Handover Stats - Intra-SGSN Type: Counter	Int32
intrasgwhaovstat-intrasgsn-success	Intra-SGW Handover Stats - Intra-SGSN - success Type: Counter	Int32
intrasgwhaovstat-intrasgsn-fail	Intra-SGW Handover Stats - Intra-SGSN - failure Type: Counter	Int32
intrasgwhaovstat-intersgsn	Intra-SGW Handover Stats - Inter-SGSN Type: Counter	Int32
intrasgwhaovstat-intersgsn-success	Intra-SGW Handover Stats - Inter-SGSN - success Type: Counter	Int32
intrasgwhaovstat-intersgsn-fail	Intra-SGW Handover Stats - Inter-SGSN - failure Type: Counter	Int32
intrasgwhaovstat-mme-to-sgsn	Intra-SGW Handover Stats - MME-to-SGSN Type: Counter	Int32
intrasgwhaovstat-mme-to-sgsn-success	Intra-SGW Handover Stats - MME-to-SGSN - success Type: Counter	Int32
intrasgwhaovstat-mme-to-sgsn-fail	Intra-SGW Handover Stats - MME-to-SGSN - failure Type: Counter	Int32
intrasgwhaovstat-sgsn-to-mme	Intra-SGW Handover Stats - SGSN-to-MME Type: Counter	Int32
intrasgwhaovstat-sgsn-to-mme-success	Intra-SGW Handover Stats - SGSN-to-MME - success Type: Counter	Int32
intrasgwhaovstat-sgsn-to-mme-fail	Intra-SGW Handover Stats - SGSN-to-MME - failure Type: Counter	Int32
pagingstat-req	Paging Statistics - Requests Type: Counter	Int32
pagingstat-rej	Paging Statistics - Rejects Type: Counter	Int32
pagingstat-fail	Paging Statistics - Failures Type: Counter	Int32
pagingstat-actidleuetrans	Paging Statistics - Active-Idle UE Transitions Type: Counter	Int32
pagingstat-idleactuetrans	Paging Statistics - Idle-Active UE Transitions Type: Counter	Int32

Variables	Description	Data Type
pagingreldatastat-totbytebuff	Paging Related Data Statistics - Total Bytes Buffered Type: Counter	Int32
pagingreldatastat-disc	Paging Related Data Statistics - Discarded Type: Counter	Int32
misc-updatabeforembreq	Miscellaneous - Uplink Data Before MBReq Type: Counter	Int32
misc-cbreqrcvbeforecsrsp	Miscellaneous - CBReq Rcvd Before CSRsp Type: Counter	Int32
indftstat-totcur-tunnels	Indirect forward tunneling: The total number of current tunnels. Type: Gauge	Int32
indftstat-totcur-bearers	Indirect forward tunneling: The total number of current bearers. Type: Gauge	Int32
indftstat-totsetup-tunnels	Indirect forward tunneling: The total number of tunnels set up. Type: Counter	Int32
indftstat-totsetup-bearers	Indirect forward tunneling: The total number of bearers set up. Type: Counter	Int32
indftstat-totrel-tunnels	Indirect forward tunneling: The total number of released tunnels. Type: Counter	Int32
indftstat-totrel-bearers	Indirect forward tunneling: The total number of released bearers. Type: Counter	Int32
indftstat-totfail-tunnels	Indirect forward tunneling: The total number of failed tunnel set ups. Type: Counter	Int32
indftstat-data-fwd-pkts	Indirect forward tunneling: The total number of forwarded packets. Type: Counter	Int32
indftstat-data-fwd-bytes	Indirect forward tunneling: The total number of forwarded bytes. Type: Counter	Int32
plmnstat-home-pdn-active	PLMN Statistics: Total Home PDNs active. Type: Gauge	Int32
plmnstat-home-pdn-setup	PLMN Statistics: Total Home PDNs setup. Type: Counter	Int32
plmnstat-home-pdn-released	PLMN Statistics: Total Home PDNs released. Type: Counter	Int32
plmnstat-roam-pdn-active	PLMN Statistics: Total Roaming PDNs active. Type: Gauge	Int32
plmnstat-roam-pdn-setup	PLMN Statistics: Total Roaming PDNs setup. Type: Counter	Int32
plmnstat-roam-pdn-released	PLMN Statistics: Total Roaming PDNs released. Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
plmnstat-vist-pdn-active	PLMN Statistics: Total Visiting PDNs active. Type: Gauge	Int32
plmnstat-vist-pdn-setup	PLMN Statistics: Total Visiting PDNs setup. Type: Counter	Int32
plmnstat-vist-pdn-released	PLMN Statistics: Total Visiting PDNs released. Type: Counter	Int32
srcviolatestat-packets-dropped	IP Source Validation - Packets Dropped. Type: Counter	Int32
srcviolatestat-bytes-dropped	IP Source Validation - Bytes Dropped. Type: Counter	Int32
The descriptions in the following set of statistics apply to these interfaces: S1-U, S4-U, S12, S5, S8, and S5/S8. (Replace the # symbol with the appropriate interface number).		
s#-uplnk-packets	S# Data Statistics: Total uplink packets. Type: Counter	Int64
s#-uplnk-bytes	S# Data Statistics: Total uplink bytes. Type: Counter	Int64
s#-downlnk-packets	S# Data Statistics: Total downlink packets. Type: Counter	Int64
s#-downlnk-bytes	S# Data Statistics: Total downlink bytes. Type: Counter	Int64
s#-uplnk-dropped-packets	S# Data Statistics: Total uplink dropped packets. Type: Counter	Int64
s#-uplnk-dropped-bytes	S# Data Statistics: Total uplink dropped bytes. Type: Counter	Int64
s#-downlnk-dropped-packets	S# Data Statistics: Total downlink dropped packets. Type: Counter	Int64
s#-downlnk-dropped-bytes	S# Data Statistics: Total downlink dropped bytes. Type: Counter	Int64
s#-uplnk-qci1totbyte	S# Data Statistics: Uplink QCI1 total bytes. Type: Counter	Int64
s#-uplnk-qci1totpkt	S# Data Statistics: Uplink QCI1 total packets. Type: Counter	Int64
s#-uplnk-qci2totbyte	S# Data Statistics: Uplink QCI2 total bytes. Type: Counter	Int64
s#-uplnk-qci2totpkt	S# Data Statistics: Uplink QCI2 total packets. Type: Counter	Int64
s#-uplnk-qci3totbyte	S# Data Statistics: Uplink QCI3 total bytes. Type: Counter	Int64

Variables	Description	Data Type
s#-uplnk-qci3totpkt	S# Data Statistics: Uplink QCI3 total packets. Type: Counter	Int64
s#-uplnk-qci4totbyte	S# Data Statistics: Uplink QCI4 total bytes. Type: Counter	Int64
s#-uplnk-qci4totpkt	S# Data Statistics: Uplink QCI4 total packets. Type: Counter	Int64
s#-uplnk-qci5totbyte	S# Data Statistics: Uplink QCI5 total bytes. Type: Counter	Int64
s#-uplnk-qci5totpkt	S# Data Statistics: Uplink QCI5 total packets. Type: Counter	Int64
s#-uplnk-qci6totbyte	S# Data Statistics: Uplink QCI6 total bytes. Type: Counter	Int64
s#-uplnk-qci6totpkt	S# Data Statistics: Uplink QCI6 total packets. Type: Counter	Int64
s#-uplnk-qci7totbyte	S# Data Statistics: Uplink QCI7 total bytes. Type: Counter	Int64
s#-uplnk-qci7totpkt	S# Data Statistics: Uplink QCI7 total packets. Type: Counter	Int64
s#-uplnk-qci8totbyte	S# Data Statistics: Uplink QCI8 total bytes. Type: Counter	Int64
s#-uplnk-qci8totpkt	S# Data Statistics: Uplink QCI8 total packets. Type: Counter	Int64
s#-uplnk-qci9totbyte	S# Data Statistics: Uplink QCI9 total bytes. Type: Counter	Int64
s#-uplnk-qci9totpkt	S# Data Statistics: Uplink QCI9 total packets. Type: Counter	Int64
s#-uplnk-othertotbyte	S# Data Statistics: Uplink other total bytes. Type: Counter	Int64
s#-uplnk-othertotpkt	S# Data Statistics: Uplink other total packets. Type: Counter	Int64
s#-uplnk-drop-qci1totbyte	S# Data Statistics: Uplink dropped QCI1 total bytes. Type: Counter	Int64
s#-uplnk-drop-qci1totpkt	S# Data Statistics: Uplink dropped QCI1 total packets. Type: Counter	Int64
s#-uplnk-drop-qci2totbyte	S# Data Statistics: Uplink dropped QCI2 total bytes. Type: Counter	Int64
s#-uplnk-drop-qci2totpkt	S# Data Statistics: Uplink dropped QCI2 total packets. Type: Counter	Int64

■ Common Syntax Options

Variables	Description	Data Type
s#-uplnk-drop-qci3totbyte	S# Data Statistics: Uplink dropped QCI3 total bytes. Type: Counter	Int64
s#-uplnk-drop-qci3totpkt	S# Data Statistics: Uplink dropped QCI3 total packets. Type: Counter	Int64
s#-uplnk-drop-qci4totbyte	S# Data Statistics: Uplink dropped QCI4 total bytes. Type: Counter	Int64
s#-uplnk-drop-qci4totpkt	S# Data Statistics: Uplink dropped QCI4 total packets. Type: Counter	Int64
s#-uplnk-drop-qci5totbyte	S# Data Statistics: Uplink dropped QCI5 total bytes. Type: Counter	Int64
s#-uplnk-drop-qci5totpkt	S# Data Statistics: Uplink dropped QCI5 total packets. Type: Counter	Int64
s#-uplnk-drop-qci6totbyte	S# Data Statistics: Uplink dropped QCI6 total bytes. Type: Counter	Int64
s#-uplnk-drop-qci6totpkt	S# Data Statistics: Uplink dropped QCI6 total packets. Type: Counter	Int64
s#-uplnk-drop-qci7totbyte	S# Data Statistics: Uplink dropped QCI7 total bytes. Type: Counter	Int64
s#-uplnk-drop-qci7totpkt	S# Data Statistics: Uplink dropped QCI7 total packets. Type: Counter	Int64
s#-uplnk-drop-qci8totbyte	S# Data Statistics: Uplink dropped QCI8 total bytes. Type: Counter	Int64
s#-uplnk-drop-qci8totpkt	S# Data Statistics: Uplink dropped QCI8 total packets. Type: Counter	Int64
s#-uplnk-drop-qci9totbyte	S# Data Statistics: Uplink dropped QCI9 total bytes. Type: Counter	Int64
s#-uplnk-drop-qci9totpkt	S# Data Statistics: Uplink dropped QCI9 total packets. Type: Counter	Int64
s#-uplnk-drop-othertotbyte	S# Data Statistics: Uplink dropped other total bytes. Type: Counter	Int64
s#-uplnk-drop-otherpkt	S# Data Statistics: Uplink dropped other total packets. Type: Counter	Int64
s#-downlnk-qci1totbyte	S# Data Statistics: Downlink QCI1 total bytes. Type: Counter	Int64
s#-downlnk-qci1totpkt	S# Data Statistics: Downlink QCI1 total packets. Type: Counter	Int64
s#-downlnk-qci2totbyte	S# Data Statistics: Downlink QCI2 total bytes. Type: Counter	Int64

Variables	Description	Data Type
s#-downlnk-qci2totpkt	S# Data Statistics: Downlink QCI2 total packets. Type: Counter	Int64
s#-downlnk-qci3totbyte	S# Data Statistics: Downlink QCI3 total bytes. Type: Counter	Int64
s#-downlnk-qci3totpkt	S# Data Statistics: Downlink QCI3 total packets. Type: Counter	Int64
s#-downlnk-qci4totbyte	S# Data Statistics: Downlink QCI4 total bytes. Type: Counter	Int64
s#-downlnk-qci4totpkt	S# Data Statistics: Downlink QCI4 total packets. Type: Counter	Int64
s#-downlnk-qci5totbyte	S# Data Statistics: Downlink QCI5 total bytes. Type: Counter	Int64
s#-downlnk-qci5totpkt	S# Data Statistics: Downlink QCI5 total packets. Type: Counter	Int64
s#-downlnk-qci6totbyte	S# Data Statistics: Downlink QCI6 total bytes. Type: Counter	Int64
s#-downlnk-qci6totpkt	S# Data Statistics: Downlink QCI6 total packets. Type: Counter	Int64
s#-downlnk-qci7totbyte	S# Data Statistics: Downlink QCI7 total bytes. Type: Counter	Int64
s#-downlnk-qci7totpkt	S# Data Statistics: Downlink QCI7 total packets. Type: Counter	Int64
s#-downlnk-qci8totbyte	S# Data Statistics: Downlink QCI8 total bytes. Type: Counter	Int64
s#-downlnk-qci8totpkt	S# Data Statistics: Downlink QCI8 total packets. Type: Counter	Int64
s#-downlnk-qci9totbyte	S# Data Statistics: Downlink QCI9 total bytes. Type: Counter	Int64
s#-downlnk-qci9totpkt	S# Data Statistics: Downlink QCI9 total packets. Type: Counter	Int64
s#-downlnk-othertotbyte	S# Data Statistics: Downlink other total bytes. Type: Counter	Int64
s#-downlnk-othertotpkt	S# Data Statistics: Downlink other total packets. Type: Counter	Int64
s#-downlnk-drop-qci1totbyte	S# Data Statistics: Downlink dropped QCI1 total bytes. Type: Counter	Int64
s#-downlnk-drop-qci1totpkt	S# Data Statistics: Downlink dropped QCI1 total packets. Type: Counter	Int64

■ Common Syntax Options

Variables	Description	Data Type
s#-downlnk-drop-qci2totbyte	S# Data Statistics: Downlink dropped QCI2 total bytes. Type: Counter	Int64
s#-downlnk-drop-qci2totpkt	S# Data Statistics: Downlink dropped QCI2 total packets. Type: Counter	Int64
s#-downlnk-drop-qci3totbyte	S# Data Statistics: Downlink dropped QCI3 total bytes. Type: Counter	Int64
s#-downlnk-drop-qci3totpkt	S# Data Statistics: Downlink dropped QCI3 total packets. Type: Counter	Int64
s#-downlnk-drop-qci4totbyte	S# Data Statistics: Downlink dropped QCI4 total bytes. Type: Counter	Int64
s#-downlnk-drop-qci4totpkt	S# Data Statistics: Downlink dropped QCI4 total packets. Type: Counter	Int64
s#-downlnk-drop-qci5totbyte	S# Data Statistics: Downlink dropped QCI5 total bytes. Type: Counter	Int64
s#-downlnk-drop-qci5totpkt	S# Data Statistics: Downlink dropped QCI5 total packets. Type: Counter	Int64
s#-downlnk-drop-qci6totbyte	S# Data Statistics: Downlink dropped QCI6 total bytes. Type: Counter	Int64
s#-downlnk-drop-qci6totpkt	S# Data Statistics: Downlink dropped QCI6 total packets. Type: Counter	Int64
s#-downlnk-drop-qci7totbyte	S# Data Statistics: Downlink dropped QCI7 total bytes. Type: Counter	Int64
s#-downlnk-drop-qci7totpkt	S# Data Statistics: Downlink dropped QCI7 total packets. Type: Counter	Int64
s#-downlnk-drop-qci8totbyte	S# Data Statistics: Downlink dropped QCI8 total bytes. Type: Counter	Int64
s#-downlnk-drop-qci8totpkt	S# Data Statistics: Downlink dropped QCI8 total packets. Type: Counter	Int64
s#-downlnk-drop-qci9totbyte	S# Data Statistics: Downlink dropped QCI9 total bytes. Type: Counter	Int64
s#-downlnk-drop-qci9totpkt	S# Data Statistics: Downlink dropped QCI9 total packets. Type: Counter	Int64
s#-downlnk-drop-othertotbyte	S# Data Statistics: Downlink dropped other total bytes. Type: Counter	Int64
s#-downlnk-drop-othertotpkt	S# Data Statistics: Downlink dropped other total packets. Type: Counter	Int64

Variables	Description	Data Type
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 64

SS7Link Schema Statistics

The SS7Link schema provides operational statistics that can be used for monitoring and troubleshooting the following products: SGSN

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 64. Bulk Statistic Variables in the SS7 Link

Variables	Description	Data Type
ss7rd-number	Number identifies the SS7 routing domain. This is a key variable.	Int32
ss7-linkset-id	Link set identifier This is a key variable.	Int32

■ Common Syntax Options

Variables	Description	Data Type
ss7-link-id	Link identifier This is a key variable.	Int32
ss7-link-mtp3-changeover-order-tx	Changeover order sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-changeover-order-rx	Changeover order received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-changeover-order-ack-tx	Changeover order acknowledgement sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-changeover-order-ack-rx	Changeover order acknowledgement received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-changeback-declaration-tx	Change-back declaration sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-changeback-declaration-rx	Change-back declaration received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-changeback-ack-tx	Change-back acknowledgement sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-changeback-ack-rx	Change-back acknowledgement received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-emergency-changeover-tx	Emergency Changeover sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-emergency-changeover-rx	Emergency Changeover received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-emergency-changeover-ack-tx	Emergency Changeover acknowledgement sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-emergency-changeover-ack-rx	Emergency Changeover acknowledgement received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-inhibit-tx	Link Inhibit sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-inhibit-rx	Link Inhibit received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-inhibit-ack-tx	Link Inhibit acknowledgement sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-inhibit-ack-rx	Link Inhibit acknowledgement received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-uninhibit-tx	Link Uninhibit sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-uninhibit-rx	Link Uninhibit received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-uninhibit-ack-tx	Link Uninhibit acknowledgement sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-uninhibit-ack-rx	Link Uninhibit acknowledgement received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32

Variables	Description	Data Type
ss7-link-mtp3-inhibit-deny-tx	Link Inhibit Denied sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-inhibit-deny-rx	Link Inhibit Denied received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-force-uninhibit-tx	Link force uninhibit sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-force-uninhibit-rx	Link force uninhibit received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-local-inhibit-test-tx	Link local inhibit test sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-local-inhibit-test-rx	Link local inhibit test received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-remote-inhibit-test-tx	Link remote inhibit test sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-remote-inhibit-test-rx	Link remote inhibit test received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-connection-order-tx	Link connection order sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-connection-order-rx	Link connection order received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-connection-order-ack-tx	Link connection order acknowledgement sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-connection-order-ack-rx	Link connection order acknowledgement received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-test-tx	Link Test sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-test-rx	Link Test received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-test-ack-tx	Link Test acknowledgement sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-test-ack-rx	Link Test acknowledgement received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-sif-octet-tx	SIF octets sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-sif-octet-rx	SIF octets received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-sio-octet-tx	SIO octet sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-sio-octet-rx	SIO octet received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-sio-msu-tx	MSUs sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-sio-msu-rx	MSUs received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-tx-msu-dropped	MSUs dropped per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-tx-msu-congestion-dropped	MSUs dropped due to congestion per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32

Variables	Description	Data Type
ss7-link-mtp3-invalid-pdu-rx	Invalid PDUs received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-congestion-threshold1	Link congestion threshold 1 per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-congestion-threshold2	Link congestion threshold 2 per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-congestion-threshold3	Link congestion threshold 3 per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-unavail-duration	Link unavailable duration per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-congested-duration	Link Congested duration per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-mtp3-inhibited-duration	Description: Total inhibited duration of the SS7 MTP3 link in deci-seconds. This counter is specific to releases 8.1 and higher. Triggers: 1. Increments when the SGSN's MTP3 link is inhibited, using a management operation command, for maintenance or testing purposes. 2. Increments when the SGSN receives an Inhibit MTP3 message from the remote end. Availability: per MTP3 layer of the SS7 link Type: Counter	Int 32
ss7-signalling-link-failure	Description: Total number of times the MTP3 link has failed between the SGSN and another network element and caused a loss of link connectivity. Triggers: Increments when SS7 signaling link goes to inactive state from active state due to link failure due to: - physical link failure - peer restarts - link is put-down by management for maintenance - no response from the peer node and the SSCOP link 'keep-alive' timer timeslot Availability: per SS7 routing domain, per linkset, per link Type: Counter	Int32
ss7-dpc-point-code	Destination PointCode	Int32
ss7-dpc-route-set-test-msg-tx	Route set test messages sent per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-route-set-congestion-test-msg-tx	Route set congestion test message sent per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-transfer-prohibited-tx	Transfer prohibited sent per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-transfer-restricted-tx	Transfer restricted sent per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-transfer-allowed-tx	Transfer allowed sent per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-transfer-controlled-tx	Transfer controlled sent per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-sif-octets-tx	Number of SIF octets sent per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-sio-octets-tx	Number of SIO octets sent per SS7 Routing Domain ID and Destination Point Code.	Int32

Variables	Description	Data Type
ss7-dpc-route-set-test-msg-rx	Route set test message received per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-route-set-congestion-test-msg-rx	Route set congestion test message received per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-transfer-prohibited-rx	Transfer prohibited received per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-transfer-restricted-rx	Transfer restricted received per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-transfer-allowed-rx	Transfer allowed received per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-transfer-controlled-rx	Transfer controlled received per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-usn-msg-rx	Number of USN message received per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-unavailable-duration	Route Unavailable duration per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-dpc-unavailable-count	Route unavailable count per SS7 Routing Domain ID and Destination Point Code.	Int32
ss7-link-sscf-mtp3-frames-tx	MTP3 Frames sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-out-of-service-pdu-tx	Out of service Pdu sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-processor-outage-tx	Processor outage Pdu sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-in-service-pdu-tx	In service Pdu sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-normal-pdu-tx	Normal Pdu sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-emergency-pdu-tx	Emergency Pdu sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-alignment-not-successfull-pdu-tx	Alignment not successful Pdu sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-management-initiated-pdu-tx	Management initiated Pdu sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-protocol-error-pdu-tx	Protocol error pdu sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-proving-not-successfull-pdu-tx	Proving not successful Pdu sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-mtp3-frames-rx	MTP3 Frames received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-out-of-service-pdu-rx	Out of service Pdu received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-processor-outage-rx	Processor outage Pdu received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-in-service-pdu-rx	In service Pdu received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32

■ Common Syntax Options

Variables	Description	Data Type
ss7-link-sscf-normal-pdu-rx	Normal Pdu received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-emergency-pdu-rx	Emergency Pdu received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-alignment-not-successfull-pdu-rx	Alignment not successful Pdu received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-management-initiated-pdu-rx	Management initiated Pdu received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-protocol-error-pdu-rx	Protocol error PDU received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-sscf-proving-not-successfull-pdu-rx	Proving not successful Pdu received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-vpi	Virtual path identifier per SS7 Routing Domain ID, Linkset ID, and Link ID used for the Quasi Signaling Application Adaptation Layer (QSAAL).	Int32
ss7-link-qsaa-vci	Virtual channel identifier per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-req-initialization-tx	Request Initialization (BGN) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-req-ack-tx	Request Acknowledgement (BGAK) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-connection-reject-tx	Connection Reject (BGREJ) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-disconnect-command-tx	Disconnect Command (END) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-disconnect-ack-tx	Disconnect Acknowledgement (ENDAK) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-resynchronization-command-tx	Resynchronization Command (RS) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-resynchronization-ack-tx	Resynchronization Acknowledgement (RSAK) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-recovery-command-tx	Recovery Command (ER) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-recovery-ack-tx	Recovery Acknowledgement (ERAK) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-seq-connection-mode-data-tx	Sequenced Connection-mode Data (SD) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-poll-tx	Transmitter State Information with request for Receive State Information (POLL) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-stat-tx	Solicited Receiver State Information (STAT) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-ustat-tx	Unsolicited Receiver State Information (USTAT) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32

Variables	Description	Data Type
ss7-link-qsaa-unnumbered-user-data-tx	Unnumbered User Data (UD) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-unnumbered-management-data-tx	Unnumbered Management Data (MD) sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-unknown-pdu-type-tx	Unknown PDU Type sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-tx-discarded-sdus	SDUs discarded sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-tx-pdus-error-pdus	PDUs with error sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-tx-discarded-pdus	PDUs discarded sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-tx-buffer-in-use-counter	Buffer in-use counter sent per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-tx-buffer-in-use-gauge	Buffer in-use gauge sent per SS7 Routing Domain ID, Linkset ID, and Link ID. This statistic value is of Gauge.	Int32
ss7-link-qsaa-req-initialization-rx	Request Initialization (BGN) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-req-ack-rx	Request Acknowledgement (BGAK) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-connection-reject-rx	Connection Reject (BGREJ) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-disconnect-command-rx	Disconnect Command (END) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-disconnect-ack-rx	Disconnect Acknowledgement (ENDAK) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-resynchronization-command-rx	Resynchronization Command (RS) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-resynchronization-ack-rx	Resynchronization Acknowledgement (RSAK) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-recovery-command-rx	Recovery Command (ER) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-recovery-ack-rx	Recovery Acknowledgement (ERAK) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-seq-connection-mode-data-rx	Sequenced Connection-mode Data (SD) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-poll-rx	Transmitter State Information with request for Receive State Information (POLL) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-stat-rx	Solicited Receiver State Information (STAT) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-ustat-rx	Unsolicited Receiver State Information (USTAT) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32

■ Common Syntax Options

Variables	Description	Data Type
ss7-link-qsaa-unnumbered-user-data-rx	Unnumbered User Data (UD) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-unnumbered-management-data-rx	Unnumbered Management Data (MD) received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-unknown-pdu-type-rx	Unknown PDU Type received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-rx-pdus-error-pdus	PDUs with error received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-rx-discarded-pdus	PDUs discarded received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-rx-buffer-in-use-counter	Buffer in-use counter received per SS7 Routing Domain ID, Linkset ID, and Link ID.	Int32
ss7-link-qsaa-rx-buffer-in-use-gauge	Buffer in-use gauge received per SS7 Routing Domain ID, Linkset ID, and Link ID. This statistic value is of Gauge.	Int32
 Important: For information on statistics that are common to all schema see the <i>Statistics and Counters Overview</i> chapter.		

Chapter 65

SS7 Routing Domain Schema Statistics

The SS7 Routing Domain schema provides operational statistics that can be used for monitoring and troubleshooting the following products: SGSN

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 65. SS7 Routing Domain Statistics

Variables	Description	Data Type
ss7rd-number	Number identifying the SS7 routing domain This is a key variable.	Int32
ss7rd-asp_instance	The Application Server Process instance in the SS7 Routing domain This is a key variable.	Int32

■ Common Syntax Options

Variables	Description	Data Type
ss7rd-sctp-init-tx	Total number of SCTP Init chunks sent per SS7 Routing Domain.	Int32
ss7rd-sctp-init-rtx	Total number of SCTP Init chunks resent per SS7 Routing Domain.	Int32
ss7rd-sctp-init-rx	Total number of SCTP Init chunks received per SS7 Routing Domain.	Int32
ss7rd-sctp-init-ack-tx	Total number of number INIT_ACKs sent per SS7 Routing Domain.	Int32
ss7rd-sctp-init-ack-rx	Total number of number INIT_ACKs received per SS7 Routing Domain.	Int32
ss7rd-sctp-shutdown-tx	Total number SHUTDOWNs sent per SS7 Routing Domain.	Int32
ss7rd-sctp-shutdown-rtx	Total number SHUTDOWNs resent per SS7 Routing Domain.	Int32
ss7rd-sctp-shutdown-rx	Total Number SHUTDOWNs received per SS7 Routing Domain.	Int32
ss7rd-sctp-shutdown-ack-tx	Total number of SHUTDOWN_ACKs sent per SS7 Routing Domain.	Int32
ss7rd-sctp-shutdown-ack-rtx	Total number of SHUTDOWN_ACKSs resent per SS7 Routing Domain.	Int32
ss7rd-sctp-shutdown-ack-rx	Total number of SHUTDOWN_ACKs received per SS7 Routing Domain.	Int32
ss7rd-sctp-cookie-tx	Total number of COOKIES sent per SS7 Routing Domain.	Int32
ss7rd-sctp-cookie-rtx	Total number COOKIES resent per SS7 Routing Domain.	Int32
ss7rd-sctp-cookie-rx	Total number of COOKIES received per SS7 Routing Domain.	Int32
ss7rd-sctp-cookie-ack-tx	Total number of COOKIE_ACKs sent per SS7 Routing Domain.	Int32
ss7rd-sctp-cookie-ack-rx	Total number COOKIE_ACKs received per SS7 Routing Domain.	Int32
ss7rd-sctp-data-tx	Total number of DATAs sent per SS7 Routing Domain.	Int32
ss7rd-sctp-data-rtx	Total number of DATAs resent per SS7 Routing Domain.	Int32
ss7rd-sctp-data-rx	Total number of DATAs received per SS7 Routing Domain.	Int32
ss7rd-sctp-sack-tx	Total number of SACKs sent per SS7 Routing Domain.	Int32
ss7rd-sctp-sack-rx	Total number of SACKs received per SS7 Routing Domain.	Int32
ss7rd-sctp-shutdown-compl-tx	Total number of Shutdown completed sent per SS7 Routing Domain.	Int32
ss7rd-sctp-shutdown-compl-rx	Total number of Shutdown completed received per SS7 Routing Domain.	Int32
ss7rd-sctp-heartbeat-tx	Total number of HEARTBEATs sent per SS7 Routing Domain.	Int32
ss7rd-sctp-heartbeat-rx	Total number of HEARTBEATs received per SS7 Routing Domain.	Int32
ss7rd-sctp-heartbeat-ack-tx	Total number of HBEAT_ACKs sent per SS7 Routing Domain.	Int32

Variables	Description	Data Type
ss7rd-sctp-heartbeat-ack-rx	Total number of HBEAT_ACKs received per SS7 Routing Domain.	Int32
ss7rd-sctp-abort-tx	Total number of ABORTs sent per SS7 Routing Domain.	Int32
ss7rd-sctp-abort-rx	Total number of ABORTs received per SS7 Routing Domain.	Int32
ss7rd-sctp-error-tx	Total number of Errors sent per SS7 Routing Domain.	Int32
ss7rd-sctp-error-rx	Total number of Errors received per SS7 Routing Domain.	Int32
ss7rd-sctp-bytes-tx	Total number of bytes sent per SS7 Routing Domain.	Int32
ss7rd-sctp-bytes-rx	Total number of bytes received per SS7 Routing Domain.	Int32
ss7rd-m3ua-data-tx	Total number of M3UA DATA messages sent	Int32
ss7rd-m3ua-duna-tx	Total number of M3UA DUNA messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-dava-tx	Total number of M3UA DAVA messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-daud-tx	Total number of M3UA DAUD messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-scon-tx	Total number of M3UA SCON messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-dupu-tx	Total number of M3UA DUPU messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-drst-tx	Total number of M3UA DRST messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-regreq-tx	Total number of M3UA REG-REQ messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-regrsp-tx	Total number of M3UA REG-RSP messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-deregreq-tx	Total number of M3UA DEREG-REQ messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-deregrsp-tx	Total number of M3UA DEREG-RSP messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspup-tx	Total number of M3UA ASPUP messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspup-ack-tx	Total number of M3UA ASPUP ACK messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspdn-tx	Total number of M3UA ASPDN messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspdn-ack-tx	Total number of M3UA ASPDN ACK messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspac-tx	Total number of M3UA ASPAC messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspac-ack-tx	Total number of M3UA ASPAC ACK messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspia-tx	Total number of M3UA SPIA messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspia-ack-tx	Total number of M3UA SPIA ACK messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-heartbeat-tx	Total number of M3UA HBEAT messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-heartbeat-ack-tx	Total number of M3UA HBEAT ACK messages sent per SS7 Routing Domain.	Int32

■ Common Syntax Options

Variables	Description	Data Type
ss7rd-m3ua-error-tx	Total number of M3UA ERR messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-notify-tx	Total number of M3UA NTFY messages sent per SS7 Routing Domain.	Int32
ss7rd-m3ua-data-rx	Total number of M3UA DATA messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-duna-rx	Total number of M3UA DUNA messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-dava-rx	Total number of M3UA DAVA messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-daud-rx	Total number of M3UA DAUD messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-scon-rx	Total number of M3UA SCON messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-dupu-rx	Total number of M3UA DUPU messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-drst-rx	Total number of M3UA DRST messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-regreq-rx	Total number of M3UA REG-REQ messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-regrsp-rx	Total number of M3UA REG-RSP messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-deregreq-rx	Total number of M3UA DEREG-REQ messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-deregrsp-rx	Total number of M3UA DEREG-RSP messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspup-rx	Total number of M3UA ASPUP messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspup-ack-rx	Total number of M3UA ASPUP ACK messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspdn-rx	Total number of M3UA ASPDN messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspdn-ack-rx	Total number of M3UA ASPDN ACK messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspac-rx	Total number of M3UA ASPAC messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspac-ack-rx	Total number of M3UA ASPAC ACK messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspia-rx	Total number of M3UA ASPIA messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-aspia-ack-rx	Total number of M3UA ASPIA ACK messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-hearbeat-rx	Total number of M3UA HBEAT messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-hearbeat-ack-rx	Total number of M3UA HBEAT ACK messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-error-rx	Total number of M3UA ERR messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-notify-rx	Total number of M3UA NTFY messages received per SS7 Routing Domain.	Int32
ss7rd-m3ua-lower-intf-pdu-tx	Description: Total number of PDUs transmitted to lower interface (SCTP layer). Triggers: Availability: per SS7 routing domain Type: Counter (Proprietary)	Int32

Variables	Description	Data Type
ss7rd-m3ua-lower-intf-pdu-size-tx	Size of DATA PDUs transmitted on lower interface per SS7 Routing Domain.	Int32
ss7rd-m3ua-lower-intf-pdu-rx	Number of DATA PDUs received on lower interface per SS7 Routing Domain.	Int32
ss7rd-m3ua-lower-intf-pdu-size-rx	Size of DATA PDUs received on lower interface per SS7 Routing Domain.	Int32
ss7rd-m3ua-upper-intf-pdu-tx	Number of DATA PDUs transmitted on upper interface per SS7 Routing Domain.	Int32
ss7rd-m3ua-upper-intf-pdu-size-tx	Size of DATA PDUs transmitted on upper interface per SS7 Routing Domain.	Int32
ss7rd-m3ua-upper-intf-pdu-rx	Number of DATA PDUs received on upper interface per SS7 Routing Domain.	Int32
ss7rd-m3ua-upper-intf-pdu-size-rx	Size of DATA PDUs received on upper interface per SS7 Routing Domain.	Int32
ss7rd-m3ua-down-no-route-found	Layer Data Error Statistics downward: no route found per SS7 Routing Domain.	Int32
ss7rd-m3ua-down-pc-unavailable	Layer Data Error Statistics downward: point code unavailable per SS7 Routing Domain.	Int32
ss7rd-m3ua-down-pc-congested	Layer Data Error Statistics downward: point code congested per SS7 Routing Domain.	Int32
ss7rd-m3ua-down-no-psp-avail	Layer Data Error Statistics downward: no PSP available per SS7 Routing Domain.	Int32
ss7rd-m3ua-down-no-nsap-avail	Layer Data Error Statistics downward: no NSAP available per SS7 Routing Domain.	Int32
ss7rd-m3ua-down-msg-failed	Layer Data Error Statistics downward: M3UA message failed per SS7 Routing Domain.	Int32
ss7rd-m3ua-down-loadshare-failed	Layer Data Error Statistics downward: load-sharing failed per SS7 Routing Domain.	Int32
ss7rd-m3ua-down-data-conges-q	Layer Data Error Statistics downward: data queued in congested Q per SS7 Routing Domain.	Int32
ss7rd-m3ua-down-data-as-pend-q	Layer Data Error Statistics downward: data queued in AS pending Q per SS7 Routing Domain.	Int32
ss7rd-m3ua-up-no-route-found	Layer Data Error Statistics upward: no route found per SS7 Routing Domain.	Int32
ss7rd-m3ua-up-pc-unavailable	Layer Data Error Statistics upward: point code unavailable per SS7 Routing Domain.	Int32
ss7rd-m3ua-up-pc-congested	Layer Data Error Statistics upward: point code congested per SS7 Routing Domain.	Int32

Variables	Description	Data Type
ss7rd-m3ua-up-no-psp-avail	Layer Data Error Statistics upward: no PSP available per SS7 Routing Domain.	Int32
ss7rd-m3ua-up-no-nsap-avail	Layer Data Error Statistics upward: no NSAP available per SS7 Routing Domain.	Int32
ss7rd-m3ua-up-msg-failed	Layer Data Error Statistics upward: M3UA message failed per SS7 Routing Domain.	Int32
ss7rd-m3ua-up-loadshare-failed	Layer Data Error Statistics upward: load-sharing failed per SS7 Routing Domain.	Int32
ss7rd-m3ua-up-data-conges-q	Layer Data Error Statistics upward: data queued in congested Q per SS7 Routing Domain.	Int32
ss7rd-m3ua-up-data-as-pend-q	Layer Data Error Statistics upward: data queued in AS pending Q per SS7 Routing Domain.	Int32
ss7rd-m3ua-psp-ps-id	Peer Server Identifier This is a key variable.	Int32
ss7rd-m3ua-psp-instance	Peer Server Process Instance This is a key variable.	Int32
ss7rd-m3ua-psp-data-tx	Total number of M3UA PSP DATA messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-duna-tx	Total number of M3UA PSP DUNA messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-dava-tx	Total number of M3UA PSP DAVA messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-dauid-tx	Total number of M3UA PSP DAUD messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-scon-tx	Total number of M3UA SCON messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-dupu-tx	Total number of M3UA PSP DUPU messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-drst-tx	Total number of M3UA PSP DRST messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-regreq-tx	Total number of M3UA PSP REG-REQ messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-regrsp-tx	Total number of M3UA PSP REG-RSP messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-deregreq-tx	Total number of M3UA PSP DEREG-REQ messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-deregrsp-tx	Total number of M3UA PSP DEREG-RSP messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32

Variables	Description	Data Type
ss7rd-m3ua-psp-aspup-tx	Total number of M3UA PSP ASPUP messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspup-ack-tx	Total number of M3UA PSP ASPUP ACK messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspdn-tx	Total number of M3UA PSP ASPDN messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspdn-ack-tx	Total number of M3UA PSP ASPDN ACK messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspac-tx	Total number of M3UA PSP ASPAC messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspac-ack-tx	Total number of M3UA PSP ASPAC ACK messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspia-tx	Total number of M3UA PSP SPIA messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspia-ack-tx	Total number of M3UA PSP SPIA ACK messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-hearbeat-tx	Total number of M3UA PSP HBEAT messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-hearbeat-ack-tx	Total number of M3UA PSP HBEAT ACK messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-error-tx	Total number of M3UA PSP ERR messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-notify-tx	Total number of M3UA PSP NTFY messages sent per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-data-rx	Total number of M3UA PSP DATA messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-duna-rx	Total number of M3UA PSP DUNA messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-dava-rx	Total number of M3UA PSP DAVA messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-daud-rx	Total number of M3UA PSP DAUD messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-scon-rx	Total number of M3UA PSP SCON messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-dupu-rx	Total number of M3UA PSP DUPU messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-drst-rx	Total number of M3UA PSP DRST messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32

■ Common Syntax Options

Variables	Description	Data Type
ss7rd-m3ua-psp-regreq-rx	Total number of M3UA PSP REG-REQ messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-regrsp-rx	Total number of M3UA PSP REG-RSP messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-deregreq-rx	Total number of M3UA PSP DEREG-REQ messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-deregrsp-rx	Total number of M3UA PSP DEREG-RSP messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspup-rx	Total number of M3UA PSP ASPUP messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspup-ack-rx	Total number of M3UA PSP ASPUP ACK messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspdn-rx	Total number of M3UA PSP ASPDN messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspdn-ack-rx	Total number of M3UA PSP ASPDN ACK messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspac-rx	Total number of M3UA PSP ASPAC messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspac-ack-rx	Total number of M3UA PSP ASPAC ACK messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspia-rx	Total number of M3UA PSP ASPIA messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-aspia-ack-rx	Total number of M3UA PSP ASPIA ACK messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-hearbeat-rx	Total number of M3UA PSP HBEAT messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-hearbeat-ack-rx	Total number of M3UA PSP HBEAT ACK messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-error-rx	Total number of M3UA PSP ERR messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-notify-rx	Total number of M3UA PSP NTFY messages received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-data-pdu-tx	Number of PSP DATA PDUs transmitted per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-data-pdu-size-tx	Size of DATA PDUs transmitted per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-data-pdu-rx	Number of DATA PDUs received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32

Variables	Description	Data Type
ss7rd-m3ua-psp-data-pdusize-rx	Size of DATA PDUs received per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-up-no-route-found	Layer Data Error Statistics: no route found per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-up-pc-unavailable	Layer Data Error Statistics: point code unavailable per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-up-pc-congested	Layer Data Error Statistics: point code congested per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-up-no-psp-avail	Layer Data Error Statistics: no PSP available per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-up-no-nsap-avail	Layer Data Error Statistics: no NSAP available per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-up-msg-failed	Layer Data Error Statistics: M3UA message failed per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-up-loadshare-failed	Layer Data Error Statistics: load-sharing failed per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-up-data-conges-q	Layer Data Error Statistics: data queued in congested Q per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-up-data-as-pend-q	Layer Data Error Statistics: data queued in AS pending Q per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-congestion-count	Congestion count per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-congestion-level1	Congestion level 1 per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-congestion-level2	Congestion level 2 per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-congestion-level3	Congestion level 3 per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-congestion-queue-size	Congestion queue size per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-congestion-queue-hw	Congestion queue Hw per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-congestion-duration	Duration of Congestion per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-unavailable-count	Unavailable count per SS7 Routing Domain, peer server ID, and PSP instance.	Int32
ss7rd-m3ua-psp-unavailable-duration	Unavailable duration per SS7 Routing Domain, peer server ID, and PSP instance.	Int32

Variables	Description	Data Type
ss7rd-mtp3-user-part-unavail-tx	Description: Total number of MTP3 User-part Unavailable messages that were sent. Triggers: Increments when a message is sent. Availability: per SS7 routing domain Type: Counter (ITU Q.704, ANSI T1.114)	Int32
ss7rd-mtp3-traffic-restart-allowed-tx	Description: Total number of MTP3 Traffic Restart Allowed messages that were sent. Triggers: Increments 1. when the first signalling link of a signalling linkset is available. 2. in the case of an ANSI variant, when a Traffic Restart Waiting message is received. Availability: per SS7 routing domain Type: Counter (ITU Q.704, ANSI T1.114)	Int32
ss7rd-mtp3-traffic-restart-waiting-tx	Description: Total number of MTP3 Traffic Restart Waiting messages that were sent. Triggers: Increments when the first signalling link of a signalling link set is available. Availability: per SS7 routing domain Type: Counter (ITU Q.704, ANSI T1.114)	Int32
ss7rd-mtp3-user-part-unavail-rx	Description: Total number of MTP3 User-part Unavailable messages that were received. Triggers: Increments when a message is received. Availability: per SS7 routing domain Type: Counter (ITU Q.704, ANSI T1.114)	Int32
ss7rd-mtp3-traffic-restart-allowed-rx	Description: Total number of MTP3 Traffic Restart Allowed messages that were received. Triggers: Increments when a message is received. Availability: per SS7 routing domain Type: Counter (ITU Q.704, ANSI T1.114)	Int32
ss7rd-mtp3-traffic-restart-waiting-rx	Description: Total number of MTP3 Traffic Restart Waiting messages that were received. Triggers: Increments when a message is received. Availability: per SS7 routing domain Type: Counter (ITU Q.704, ANSI T1.114)	Int32
ss7rd-mtp3-msu-dropped-routing-err	Description: Total number of M3UA messages dropped due to routing error. Triggers: Increments for anyone of the following: 1. signalling point code restart, 2. route restart, 3. no route found, 4. no NSAP found, 5. invalid SLS, 6. invalid link type, 7. invalid data. Availability: per SS7 routing domain Type: Counter - Proprietary	Int32
ss7-adjacent-point-code	Adjacent Point Code This is a key variable.	Int32

Variables	Description	Data Type
ss7-adjacent-spc-not-accessible	Description: Total number of failures to access the adjacent (directly connected via SS7 link) signaling point code (SPC) element, such as the RNC, HLR, signaling gateway, etc.,. Triggers: Increments when the adjacent SPC goes to unavailable state from available state, possibly due to: - all SS7 links connected to the adjacent SPC are unavailable - the adjacent SPC is made inaccessible by management Availability: per adjacent point code Type: Counter	Int32



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 66

System Schema Statistics

The System schema provides operational statistics that can be used for monitoring and troubleshooting the following products: All

This schema provides the following types of statistics:

- **Counter:** A counter records incremental data cumulatively and rolls over when the counter limit is reached.
 - All counter statistics are cumulative and reset only by one of the following methods: roll-over when limit is reached, after a system restart, or after a clear command is performed.
 - The limit depends upon the data type.
- **Gauge:** A gauge statistic indicates a single value; a snapshot representation of a single point in time within a defined time frame. The gauge changes to a new value with each snapshot though a value may repeat from one period to the next. The limit depends upon the data type.
- **Information:** This type of statistic provides information, often intended to differentiate sets of statistics; for example, a VPN name or IP address. The type of information provided depends upon the data type.

The data type defines the format of the data for the value provided by the statistic. The following data types are used in statistics for this schema:

- **Int32/Int64:** An integer, either 32-bit or 64-bit:
 - For statistics with the Int32 data type, the roll-over to zero limit is 4,294,967,295.
 - For statistics with the Int64 data type, the roll-over to zero limit is 18,446,744,073,709,551,615.
- **Float:** A numeric value that can be represented fractionally; for example, 1.345.
- **String:** A series of ASCII alphanumeric characters in a single grouping, usually pre-configured.

 **Important:** Unless otherwise indicated, all statistics are counters and all statistics are standards-based.

Key Variables: Every schema has some variables which are typically referred to as 'key variables'. These key variables provide index markers to identify which object the statistics apply to. For example, in the card schema, the card number (variable %card%) uniquely identifies a card. For an HA service, the keys would be "%vpnname%" plus "%servname%", as the combination uniquely identifies an HA service. So, in a given measurement interval, one row of statistics will be generated per unique key. The schema keys are identified in the Description section of the table.

Table 66. Bulk Statistic Variables in the System-Level Schema

Variables	Description	Data Type
sess-ttlarrived	Description: The total number of calls for all Session Managers for which registration requests were received. Type: Counter	Int32

Variables	Description	Data Type
sess-ttlrejected	Description: The total number of calls for all Session Managers that were rejected. Type: Counter	Int32
sess-ttlconnected	Description: The total number of calls for all Session Managers that are connected (including active, dormant, being set up, and being torn down). Type: Gauge	Int32
sess-ttlfailed	Description: The total number of calls for all Session Managers that failed. Type: Counter	Int32
sess-ttldisconn	Description: The total number of calls disconnected for all Session Managers. Type: Counter	Int32
sess-ttlhandoff	Description: The total number of handoffs for all Session Managers. Type: Counter	Int64
sess-ttlrenewal	Description: The total number of renewals for all Session Managers. Type: Counter	Int64
sess-ttlcallop	Description: The total number of call operations for all Session Managers. The number of call operations is calculated as the total number of calls that arrived, were rejected, were disconnected, handed-off, and renewed. Type: Counter	Int64
sess-ttlauthsucc	Description: The total number of successful authentications for calls for all Session Managers. Trigger: Increments whenever the local or RADIUS authentication is successful for a session. Availability: Per Session Manager instance Type: Counter	Int32
sess-ttlauthfail	Description: The total number of failed authentications for calls for all Session Managers. Trigger: Increments whenever the local or RADIUS authentication fails for a session. Availability: Per Session Manager instance Type: Counter	Int32
sess-curaaaactive	Description: Indicates the number of currently active AAA sessions for all Session Managers. Trigger: Increments whenever a new AAA session is established. Decrements when the session is disconnected Availability: Per Session Manager instance Type: Gauge	Int32
sess-curaaaadeleting	Description: Indicates the number of current AAA sessions being deleted for all Session Managers. Trigger: Increments when a AAA session is disconnected and the final accounting message is still pending to be delivered to an external server. Decrements when the final accounting message is delivered to the server. Availability: Per Session Manager instance Type: Gauge	Int32

Variables	Description	Data Type
sess-curaaacctpending	Description: Indicates the number of current AAA sessions with accounting pending for all Session Managers. Trigger: Increments for every occurrence of AAA sessions with accounting message pending for all Session Managers. Decrements when the accounting message is delivered to the external server. Availability: Per Session Manager instance Type: Gauge	Int32
sess-curaaacctitemsused	Description: Indicates the number of current AAA accounting items used by all Session Manager instances. Trigger: Increments whenever the current AAA accounting request is generated and used by all Session Manager instances. Decrements when the accounting message is delivered to the external server. Availability: Per Session Manager instance Type: Gauge	Int32
sess-curaaacctitemsmax	Description: Indicates the number of current AAA accounting items allowed by all Session Manager instances. Trigger: Increments whenever the current AAA accounting request is allowed by all Session Manager instances. Availability: Per Session Manager instance Type: Gauge	Int32
sess-curaaabuffused	Description: Indicates the number of current AAA buffer space in megabytes used by all Session Manager instances. Trigger: Increments whenever the current AAA buffer is allocated and used by all Session Manager instances. Decrements whenever the current AAA buffer is freed for use. Availability: Per Session Manager instance Type: Gauge	Int32
sess-curaaabuffmax	Description: Indicates the current maximum AAA buffer space allowed in megabytes used by all Session Manager instances. Trigger: Increments whenever the current AAA buffer space is allowed and used by all Session Manager. Availability: Per Session Manager instance Type: Counter	Int32
sess-ttlaacancauth	Description: The total number of AAA authentication requests cancelled by all Session Manager instances. The cancellation can be due to various reasons like administrative clear or access side call clear, etc. Trigger: Increments when a Session Manager cancels an outstanding authentication request which is waiting for a response from authentication server. Availability: Per Session Manager instance Type: Counter	Int32

Variables	Description	Data Type
sess-ttlaaacctpurged	Description: The total number of AAA accounting requests received by this Session Manager instance, that have to be purged for all Session Managers because the storage limit of pending accounting requests has exceeded. Trigger: Increments whenever a AAA accounting request has to be purged for all Session Managers Availability: Per Session Manager instance Type: Counter	Int32
sess-ttlradacctpurged	Description: The total number of RADIUS accounting requests received by this Session Manager instance, that have to be purged for all Session Managers because the storage limit of pending accounting requests has exceeded. Trigger: Increments whenever a RADIUS accounting request has to be purged for all Session Managers Availability: Per Session Manager instance Type: Counter	Int32
sess-ttlpcup	Description: The total number of calls for all Session Managers that have completed the Link Control Protocol (LCP) phase of the registration process. Type: Counter	Int32
sess-ttlipcpup	Description: The total number of calls for all Session Managers that have completed the Internet Protocol Control Protocol (IPCP) phase of the registration process. Type: Counter	Int32
sess-ttlsrcviol	Description: The total number of source violations experienced for all calls for all Session Managers. Type: Counter	Int32
sess-ttlkeepfail	Description: The total number of keep-alive failures experienced for all calls for all Session Managers. Type: Counter	Int32
sess-ttlempy fwd	Description: The total number of empty forwarded packet sessions. Type: Counter	Int32
sess-ttlempyrev	Description: The total number of empty reverse packet sessions. Type: Counter	Int32
sess-ttlproxysql-redirec	Description: The total number of sessions redirected by Proxy-DNS. Type: Counter	Int32
sess-ttlproxysql-passthru	Description: The total number of sessions passed through by Proxy-DNS. Type: Counter	Int32
sess-ttlproxysql-drop	Description: The total number of sessions dropped by Proxy-DNS. Type: Counter	Int32
sess-curtl calls	Description: The number of calls for all Session Managers that are currently in progress (active, dormant, being set up, or being torn down). Type: Gauge	Int32
sess-curnonanchorconn	Description: The total number of non-anchor session connections on ASN-GW. Type: Counter	Int32

Variables	Description	Data Type
sess-curauthonlyconn	Description: The total number of calls which connected in Auth-Only mode. Type: Counter	Int32
sess-cursipconn	Description: The total number of Simple IP data sessions that are currently being supported for all Session Managers. Type: Gauge	Int32
sess-curmipconn	Description: The total number of Mobile IP data sessions that are currently being supported for all Session Managers. Type: Gauge	Int32
sess-curpmipconn	Description: The total number of Proxy Mobile IP data sessions that are currently being supported for all Session Managers. Type: Gauge	Int32
sess-curhaipseconn	Description: The total number of sessions that are in progress in the HA-IPSEC connected state Type: Gauge	Int32
sess-curl2tplacconn	Description: The number of L2TP LAC sessions that are currently being supported for all Session Managers. Type: Gauge	Int32
sess-curpdptypeipconn	Description: The number of sessions that are currently in progress in the PDP-TYPE-IP Connected State Type: Gauge	Int32
sess-curpdtypepppconn	Description: The number of sessions that are currently in progress in the PDP-TYPE-PPP Connected State Type: Gauge	Int32
sess-curbcmcsconn	Description: The number of sessions that are currently in progress in the BCMCS Connected State. Type: Gauge	Int32
sess-curactcall	Description: The number of sessions currently active for all Session Managers. Type: Gauge	Int32
sess-curdormcall	Description: The number of sessions currently dormant for all Session Managers. Type: Gauge	Int32
sess-curalwayson	Description: The number of always-on calls that are currently in progress. Type: Gauge	Int32
sess-curarrived	Description: The number of sessions that are currently at the onset of the registration process for all Session Managers. Type: Gauge	Int32
sess-curlcpnegot	Description: The number of sessions for all Session Managers that are currently in the Link Control Protocol (LCP) negotiation phase of the registration process. Type: Gauge	Int32
sess-curlcpup	Description: The number of sessions for all Session Managers that have just completed the Link Control Protocol (LCP) negotiation phase of the registration process. Type: Gauge	Int32

Variables	Description	Data Type
sess-curauth	Description: The number of sessions for all Session Managers that are currently in the process of being authenticated. Type: Gauge	Int32
sess-curbcmcsauth	Description: The number of sessions currently in progress that are at the BCMCS Service Authenticating state. Type: Gauge	Int32
sess-curauthed	Description: The number of sessions for all Session Managers that have just completed the authentication phase of the registration process. Type: Gauge	Int32
sess-curdhcpending	Description: The number of sessions for all Session Managers that are pending for DHCP. Type: Gauge	Int32
sess-curl2tplacconnecting	Description: The number of sessions currently in progress that are at the L2TP-LAC Connecting state. Type: Gauge	Int32
sess-curipcpup	Description: The number of sessions for all Session Managers that have just completed the Internet Protocol Control Protocol (IPCP) phase of the registration process. Type: Gauge	Int32
sess-curimsauthorizing	Description: The number of sessions for all Session Managers that are currently in the process of being authorized for IMS. Type: Gauge	Int32
sess-curimsauthorized	Description: The number of sessions for all Session Managers that are currently being authorized for IMS. Type: Gauge	Int32
sess-curimmeattached	Description: The total number of MME sessions that are currently attached with this MME. Type: Gauge	Int32
sess-curdisc	Description: The number of sessions for all Session Managers that are currently in the process of disconnecting. Type: Gauge	Int32
sess-ttlprepaid	Description: The total number of pre-paid sessions processed by all Session Managers. Type: Counter	Int32
sess-curprepaid	Description: The number of pre-paid sessions currently being processed by all Session Managers. Type: Gauge	Int32
sess-ttlonlineauthreq	Description: The total number of 3GPP2 online authentication requests for all Session Managers. Trigger: Increments whenever 3GPP2 RADIUS prepaid online authentication requests are sent out Availability: Per Session Manager instance Type: Counter	Int32

Variables	Description	Data Type
sess-ttlonlineauthsucc	Description: The total number of successful authentications for Online Access Requests for all Session Managers. Trigger: Increments whenever 3GPP2 RADIUS prepaid online authentication successful message is received Availability: Per Session Manager instance Type: Counter	Int32
sess-ttlonlineauthfail	Description: The total number of failed authentications for Online Access Requests for all Session Managers. Trigger: Increments whenever 3GPP2 RADIUS prepaid online authentication failure happens Availability: Per Session Manager instance Type: Counter	Int32
sess-ttlonlineprepaiderr	Description: The total number of 3GPP2 online prepaid errors. Trigger: Increments whenever 3GPP2 RADIUS prepaid online authentication response is not honored due to failures like attribute missing, etc Availability: Per Session Manager instance Type: Counter	Int32
sess-ttlprepaidinitautherr	Description: The total number of 3GPP2 prepaid initial authorization errors. Trigger: Increments when 3GPP2 RADIUS prepaid online authentication rejects for the first online access request Availability: Per Session Manager instance Type: Counter	Int32
sess-ttlcrprpattempt	Description: The total number of Closed RP-RP attempted handoffs. Type: Counter	Int32
sess-ttlcrprpsuccess	Description: The total number of Closed RP-RP successful handoffs. Type: Counter	Int32
sess-ttlrcrprattempt	Description: The total number of RP-Closed RP attempted handoffs Type: Counter	Int32
sess-ttlrcrprpsuccess	Description: The total number of RP-Closed RP successful handoffs. Type: Counter	Int32
sess-ttlinterasngwattempt	Description: The total number of sessions attempting inter-ASN-GW handovers. Type: Counter	Int32
sess-ttlinterasngwsuccess	Description: The total number of sessions successfully completing inter-ASN-GW handovers. Type: Counter	Int32
sess-ttlintraasngwattempt	Description: The total number of sessions attempting intra-ASN-GW handovers. Type: Counter	Int32
sess-ttlintraasngwsuccess	Description: The total number of sessions successfully completing intra-ASN-GW handovers. Type: Counter	Int32
sess-rxpkt-16	Description: The total number of uplink packets of less than 17 bytes sent from UEs to all Session Managers. Type: Counter	Int64

Variables	Description	Data Type
sess-tpkt-16	Description: The total number of downlink packets of less than 17 bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-rpkt-64	Description: The total number of uplink packets between 17 and 64 bytes sent from UEs to all Session Managers. Type: Counter	Int64
sess-tpkt-64	Description: The total number of downlink packets between 17 and 64 bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-rpkt-127	Description: The total number of uplink packets between 65 and 127 bytes sent from UEs to all Session Managers. Type: Counter	Int64
sess-tpkt-127	Description: The total number of downlink packets between 65 and 127 bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-rpkt-255	Description: The total number of uplink packets between 128 and 255 bytes sent from UEs to all Session Managers. Type: Counter	Int64
sess-tpkt-255	Description: The total number of downlink packets between 128 and 255 bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-rpkt-511	Description: The total number of uplink packets between 256 and 511 bytes sent from UEs to all Session Managers. Type: Counter	Int64
sess-tpkt-511	Description: The total number of downlink packets between 256 and 511 bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-rpkt-1023	Description: The total number of uplink packets between 512 and 1023 bytes sent from UEs to all Session Managers. Type: Counter	Int64
sess-tpkt-1023	Description: The total number of downlink packets between 512 and 1023 bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-rpkt-2047	Description: The total number of uplink packets between 1024 and 2047 bytes sent from UEs to all Session Managers. Type: Counter	Int64
sess-tpkt-2047	Description: The total number of downlink packets between 1024 and 2047 bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-rpkt-4095	Description: The total number of uplink packets between 2048 and 4095 bytes sent from UEs to all Session Managers. Type: Counter	Int64

Variables	Description	Data Type
sess-txpkt-4095	Description: The total number of downlink packets between 2048 and 4095 bytes sent to UE s from all Session Managers. Type: Counter	Int64
sess-rxpkt-4500	Description: The total number of uplink packets between 4096 and 4500 bytes sent from UEs to all Session Managers. Type: Counter	Int64
sess-txpkt-4500	Description: The total number of downlink packets between 4096 and 4500 bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-rxpkt-over4500	Description: The total number of uplink packets greater than 4500 bytes sent from UEs to all Session Managers. Type: Counter	Int64
sess-txpkt-over4500	Description: The total number of downlink packets greater than 4500 bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-txbytes	Description: The number of downlink bytes sent to UEs from all Session Managers. Type: Counter	Int64
sess-rxbytes	Description: The number of uplink bytes sent from UEs to all Session Managers. Type: Counter	Int64
sess-txpackets	Description: The number of downlink packets sent to UEs from all Session Managers. Type: Counter	Int64
sess-rxpackets	Description: The number of uplink packets sent from UEs to all Session Managers. Type: Counter	Int64
sess-ttlconnected-1xrtt	Description: The total number of sessions connected with 1xRTT. Type: Counter	Int32
sess-txbytes-1xrtt	Description: The number of bytes transmitted via 1xRTT. Type: Counter	Int64
sess-rxbytes-1xrtt	Description: The number of bytes received via 1xRTT. Type: Counter	Int64
sess-txpackets-1xrtt	Description: The number of packets transmitted via 1xRTT. Type: Counter	Int64
sess-rxpackets-1xrtt	Description: The number of packets received via 1xRTT. Type: Counter	Int64
sess-ttlconnected-evdorev0	Description: The total number of sessions connected with EvDO Rev 0. Type: Counter	Int32
sess-txbytes-evdorev0	Description: The number of bytes transmitted via EvDO Rev 0. Type: Counter	Int64
sess-rxbytes-evdorev0	Description: The number of bytes received via EvDO Rev 0. Type: Counter	Int64

Variables	Description	Data Type
sess-txpackets-evdorev0	Description: The number of packets transmitted via EvDO Rev 0. Type: Counter	Int64
sess-rxpackets-evdorev0	Description: The number of packets received via EvDO Rev 0. Type: Counter	Int64
sess-ttlconnected-evdoreva	Description: The total number of sessions connected with EvDO Rev A. Type: Counter	Int32
sess-txbytes-evdoreva	Description: The number of bytes transmitted via EvDO Rev A. Type: Counter	Int64
sess-rxbytes-evdoreva	Description: The number of bytes received via EvDO Rev A. Type: Counter	Int64
sess-txpackets-evdoreva	Description: The number of packets transmitted via EvDO Rev A. Type: Counter	Int64
sess-rxpackets-evdoreva	Description: The number of packets received via EvDO Rev A. Type: Counter	Int64
sess-siptxbytes	Description: The number of bytes transmitted via Simple IP-type sessions. Type: Counter	Int64
sess-siprxbytes	Description: The number of bytes received for Simple IP-type sessions. Type: Counter	Int64
sess-miptxbytes	Description: The number of bytes transmitted for Mobile IP-type sessions. Type: Counter	Int64
sess-miprxbytes	Description: The number of bytes received for Mobile IP-type sessions. Type: Counter	Int64
sess-calldur-1min	Description: The total number of sessions for all Session Managers that lasted less than 1 minute. Type: Counter	Int32
sess-calldur-2min	Description: The total number of sessions for all Session Managers that lasted less than 2 minutes but were greater than or equal to 1 minute. Type: Counter	Int32
sess-calldur-5min	Description: The total number of sessions for all Session Managers that lasted less than 5 minutes but were greater than or equal to 2 minutes. Type: Counter	Int32
sess-calldur-15min	Description: The total number of sessions for all Session Managers that lasted less than 15 minutes but were greater than or equal to 5 minutes. Type: Counter	Int32
sess-calldur-1hour	Description: The total number of sessions for all Session Managers that lasted less than 1 hour but greater than or equal to 15 minutes. Type: Counter	Int32
sess-calldur-4hour	Description: The total number of sessions for all Session Managers that lasted less than 4 hours but were greater than or equal to 1 hour. Type: Counter	Int32

Variables	Description	Data Type
sess-calldur-12hour	Description: The total number of sessions for all Session Managers that lasted less than 12 hours but were greater than or equal to 4 hours. Type: Counter	Int32
sess-calldur-24hour	Description: The total number of sessions for all Session Managers that lasted less than 24 hours but were greater than or equal to 12 hours. Type: Counter	Int32
sess-calldur-over24hour	Description: The total number of sessions for all Session Managers that lasted 24 hours or longer. Type: Counter	Int32
sess-setuptime-100ms	Description: The total number of sessions for all Session Managers that were setup in less than 100 milliseconds. Type: Counter	Int32
sess-setuptime-200ms	Description: The total number of sessions for all Session Managers for which the setup time was less than 200 milliseconds but greater than or equal to 100 milliseconds. Type: Counter	Int32
sess-setuptime-300ms	Description: The total number of sessions for all Session Managers for which the setup time was less than 300 milliseconds but greater than or equal to 200 milliseconds. Type: Counter	Int32
sess-setuptime-400ms	Description: The total number of sessions for all Session Managers for which the setup time was less than 400 milliseconds but greater than or equal to 300 milliseconds. Type: Counter	Int32
sess-setuptime-500ms	Description: The total number of sessions for all Session Managers for which the setup time was less than 500 milliseconds but greater than or equal to 400 milliseconds. Type: Counter	Int32
sess-setuptime-600ms	Description: The total number of sessions for all Session Managers for which the setup time was less than 600 milliseconds but greater than or equal to 500 milliseconds. Type: Counter	Int32
sess-setuptime-700ms	Description: The total number of sessions for all Session Managers for which the setup time was less than 700 milliseconds but greater than or equal to 600 milliseconds. Type: Counter	Int32
sess-setuptime-800ms	Description: The total number of sessions for all Session Managers for which the setup time was less than 800 milliseconds but greater than or equal to 700 milliseconds. Type: Counter	Int32
sess-setuptime-900ms	Description: The total number of sessions for all Session Managers for which the setup time was less than 900 milliseconds but greater than or equal to 800 milliseconds. Type: Counter	Int32
sess-setuptime-1sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 1 second but greater than or equal to 200 milliseconds. Type: Counter	Int32
sess-setuptime-2sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 2 seconds but greater than or equal to 1 second. Type: Counter	Int32

Variables	Description	Data Type
sess-setuptime-3sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 3 seconds but greater than or equal to 2 seconds. Type: Counter	Int32
sess-setuptime-4sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 4 seconds but greater than or equal to 3 seconds. Type: Counter	Int32
sess-setuptime-6sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 6 seconds but greater than or equal to 4 seconds. Type: Counter	Int32
sess-setuptime-8sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 8 seconds but greater than or equal to 6 seconds. Type: Counter	Int32
sess-setuptime-10sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 10 seconds but greater than or equal to 8 seconds. Type: Counter	Int32
sess-setuptime-12sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 12 seconds but greater than or equal to 10 seconds. Type: Counter	Int32
sess-setuptime-14sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 14 seconds but greater than or equal to 12 seconds. Type: Counter	Int32
sess-setuptime-16sec	Description: The total number of sessions for all Session Managers for which the setup time was less than 16 seconds but greater than or equal to 14 seconds. Type: Counter	Int32
sess-setuptime-over16sec	Description: The total number of sessions for all Session Managers for which the setup time was 16 seconds or more. Type: Counter	Int32
sess-setuptime-18sec	Description: Proprietary counter indicates the total number of sessions for all Session Managers for which the setup time was more than 16 seconds but less than or equal to 18 seconds. Triggers: Changes whenever a new session takes setup time of more than 16 seconds but less than or equal to 18 seconds. Availability: Across the System. Type: Counter	Int32
sess-setuptime-over18sec	Description: Proprietary counter indicates the total number of sessions for all Session Managers for which the setup time was more than 18 seconds. Triggers: Changes every time when a new session takes more than 18 seconds to setup. Availability: Across the System. Type: Counter	Int32
ggsn-ttlsgsnconn	Description: The total number of connections registered between GGSN and SGSN on this system. Type: Gauge	Int32

Variables	Description	Data Type
ggsn-cursgsnact	Description: The total number of SGSNs currently active with GGSN on this system. Type: Gauge	Int32
flow-ttlestab	Description: The total number of flows that were established by session managers. Type: Counter	Int32
flow-ttldisconn	The total number of flows that were disconnected by session managers. Type: Counter	Int32
flow-curdynamic	Description: The current number of dynamic flows. Type: Gauge	Int32
aaa-ttlreq	Description: The total number of AAA requests. Trigger: Increments when a AAA request is sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curreq	Description: The number of active AAA requests. Trigger: Increments when an active AAA request is sent to the server Decrements when a response is received from the server for the active AAA request Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-ttlauthreq	Description: The total number of AAA authentication requests. Trigger: Increments when a AAA authentication request is sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curauthreq	Description: The number of active AAA authentication requests. Trigger: Increments when an active AAA authentication request is sent to the server Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-ttlauthprobe	Description: The total number of AAA authentication probes. Trigger: Increments when a AAA authentication probe request is sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curauthprobe	Description: The number of active AAA authentication probes. Trigger: Increments when an active AAA authentication probe request is sent to the server Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-ttlauthkeepalive	Description: The total number of AAA authentication keepalive requests sent. Trigger: Increments when a AAA authentication keepalive request is sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curauthkeepalive	Description: The number of current AAA authentication keepalive requests being processed. Trigger: Increments when an active AAA authentication keepalive request is sent to the server Availability: Per AAA Manager Instance Type: Gauge	Int32

Variables	Description	Data Type
aaa-ttlacctreq	Description: The total number of AAA accounting requests. Trigger: Increments when a AAA accounting request is sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curacctreq	Description: The number of active AAA accounting requests. Trigger: Increments when an active AAA accounting request is sent to the server Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-ttlacctkeepalive	Description: The total number of AAA accounting keepalive requests sent. Trigger: Increments when a AAA accounting keepalive request is sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curacctkeepalive	Description: The number of current AAA accounting keepalive requests being processed. Trigger: Increments when an active AAA accounting keepalive request is sent to the server Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-ttlauthsucc	Description: The total number of successful AAA authentication. Trigger: Increments whenever the AAA authentication is successful Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlauthfail	Description: The total number of AAA authentication failed. Trigger: Increments whenever the AAA authentication fails Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlauthpurged	Description: The total number of AAA authentication purged. Trigger: Increments whenever a AAA authentication request is purged Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlauthcancelled	Description: The total number of AAA authentication requests cancelled. Trigger: Increments whenever a AAA authentication request is cancelled Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlauthkeepalivesuccess	Description: The total number of AAA authentication keepalive successes. Trigger: Increments whenever a AAA keepalive authentication is successful Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlauthkeepalivefailure	Description: The total number of AAA authentication keepalive failures. Trigger: Increments whenever a AAA keepalive authentication fails Availability: Per AAA Manager Instance Type: Counter	Int32

Variables	Description	Data Type
aaa-ttlauthkeepalivepurged	Description: The total number of AAA authentication keepalive purges. Trigger: Increments whenever a AAA authentication keepalive request is purged Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlauthdmuchal	Description: The total number of AAA authentication DMU challenged. Trigger: Increments whenever a AAA authentication request is challenged for Dynamic Mobile Keying update. Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curallocreq	Description: The number of current allocation requests being processed. Trigger: Increments when a currently allocated request has been processed Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-curmaxreq	Description: The number of current maximum requests being processed. Trigger: Increments when a current maximum request has been processed Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-ttldiamauthreq	Description: The total number of Diameter authentication requests. Trigger: Increments when a Diameter authentication request is sent to the Diameter server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curdiamauthreq	Description: The total number of current Diameter authentication requests. Trigger: Increments when a Diameter authentication request is sent to the Diameter server Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-ttldiamauthreqretrieved	Description: The total number of Diameter authentication requests retrieved. Trigger: Increments when a Diameter authentication request is retrieved Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttldiamauthreqdrop	Description: The total number of Diameter authentication requests dropped. Trigger: Increments when a Diameter authentication request is dropped or ignored Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlradauthreq	Description: The total number of AAA authentication requests on RADIUS server. Trigger: Increments when a AAA authentication request is sent to the RADIUS server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curradauthreq	Description: The number of active AAA authentication requests on RADIUS server. Trigger: Increments when an active AAA authentication request is sent to the RADIUS server Availability: Per AAA Manager Instance Type: Gauge	Int32

Variables	Description	Data Type
aaa-ttlradauthreqretried	Description: The total number of AAA authentication requests retried on RADIUS server. Trigger: Increments when a AAA authentication request is retried on to the RADIUS server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlradauthrspdrop	Description: The total number of RADIUS authentication requests dropped. Trigger: Increments when a RADIUS authentication request is dropped or ignored Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlclauthreq	Description: The total number of AAA authentication requests on local server. Trigger: Increments when a AAA authentication request is sent to the local server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curclclauthreq	Description: The number of active local authentication requests. Trigger: Increments when an active AAA authentication request is sent to the local server Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-ttlpseudoauthreq	Description: The total number of pseudo AAA authentication requests. Trigger: Increments when a pseudo AAA authentication request is sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-curpseudoauthreq	Description: The number of active pseudo AAA authentication requests. Trigger: Increments when an active pseudo AAA authentication request is sent to the server Availability: Per AAA Manager Instance Type: Gauge	Int32
aaa-ttlauthnuluser	Description: The total number of unattempted AAA authentication requests. Trigger: Increments when an unattempted AAA authentication request is sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlacctsucc	Description: The total number of AAA accounting requests succeeded. Trigger: Increments when a AAA accounting request is successfully sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlacctpurged	Description: The total number of AAA accounting requests purged. Trigger: Increments when a AAA accounting request is purged Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlacctcancelled	Description: The total number of AAA accounting requests cancelled. Trigger: Increments when a AAA accounting request is cancelled Availability: Per AAA Manager Instance Type: Counter	Int32

Variables	Description	Data Type
aaa-ttlacctkeepalivesuccess	Description: The total number of AAA accounting keepalive successes. Trigger: Increments when a AAA accounting keepalive request is successfully sent to the server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlacctkeepalivetimeout	Description: The total number of AAA accounting keepalive timeouts Trigger: Increments when a AAA accounting keepalive request is timed out Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlacctkeepalivepurged	Description: The total number of AAA accounting keepalive purges. Trigger: Increments when a AAA accounting keepalive request is purged Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlradacctreq	Description: The total number of RADIUS accounting requests. Trigger: Increments when a RADIUS accounting request is sent to the RADIUS server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlradacctcancelled	Description: The total number of RADIUS accounting requests cancelled. Trigger: Increments when a RADIUS accounting request is cancelled Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlradacctpurged	Description: The total number of RADIUS accounting requests purged. Trigger: Increments when a RADIUS accounting request is purged Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlradacctreqretried	Description: The total number of AAA accounting requests retried on RADIUS server. Trigger: Increments when a AAA accounting request is retried on to the RADIUS server Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlradacctrspdropped	Description: The total number of RADIUS accounting responses dropped. Trigger: Increments when a RADIUS accounting response is dropped or ignored Availability: Per AAA Manager Instance Type: Counter	Int32
aaa-ttlmgrpurgedrequests	Description: The total number of AAAMgr purged requests. Trigger: Increments for every occurrence of AAA Manager purged requests Availability: Per AAA Manager Instance Type: Counter	Int32
diamauth-msg-mareq	Description: Diameter Authentication Message Statistics - The total number of Multimedia-Auth-Request messages sent. Trigger: Increments when an MAR is sent Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamauth-msg-maans	Description: Diameter Authentication Message Statistics - The total number of Multimedia-Auth-Answer messages received. Trigger: Increments when an MAA is received Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-marretry	Description: Diameter Authentication Message Statistics - The total number of retries for Multimedia-Auth-Request messages. Trigger: Increments when an MAR is retried Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-matimeout	Description: Diameter Authentication Message Statistics - The total number of timeouts of Multimedia-Auth-Answer messages. Trigger: Increments when an MAA is timed out Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-maadropped	Description: Diameter Authentication Message Statistics - The total number of Multimedia-Auth-Answer messages dropped. Trigger: Increments when an MAA is dropped Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-sareq	Description: Diameter Authentication Message Statistics - The total number of Server-Assignment-Request messages sent. Trigger: Increments when an SAR is sent Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-saans	Description: Diameter Authentication Message Statistics - The total number of Server-Assignment-Answer messages received. Trigger: Increments when an SAA is received Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-sarretry	Description: Diameter Authentication Message Statistics - The total number of retries for Server-Assignment-Request Messages. Trigger: Increments when an SAR is retried Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-satimeout	Description: Diameter Authentication Message Statistics - The total number of timeouts of Server-Assignment-Answer messages. Trigger: Increments when an SAA is timed out Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-saadropped	Description: Diameter Authentication Message Statistics - The total number of Server-Assignment-Answer messages dropped. Trigger: Increments when an SAA is dropped Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamauth-msg-uareq	Description: Diameter Authentication Message Statistics - The total number of User-Authorization-Request messages sent. Trigger: Increments when a UAR is sent Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-uaans	Description: Diameter Authentication Message Statistics - The total number of User-Authorization-Answer messages received. Trigger: Increments when a UAA is received Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-uarretry	Description: Diameter Authentication Message Statistics - The total number of retries for User-Authorization-Request messages. Trigger: Increments when a UAR is retried Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-uaatimeout	Description: Diameter Authentication Message Statistics - The total number of timeouts of User-Authorization-Answer messages. Trigger: Increments when a UAA is timed out Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-uaadropped	Description: Diameter Authentication Message Statistics - The total number of User-Authorization-Answer messages dropped. Trigger: Increments when a UAA is dropped Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-lireq	Description: Diameter Authentication Message Statistics - The total number of Location-Info-Request messages sent. Trigger: Increments when an LIR is sent Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-lians	Description: Diameter Authentication Message Statistics - The total number of Location-Info-Answer messages received. Trigger: Increments when an LIA is received Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-lirretry	Description: Diameter Authentication Message Statistics - The total number of retries for Location-Info-Request messages. Trigger: Increments when an LIR is retried Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-liatimeout	Description: Diameter Authentication Message Statistics - The total number of timeouts of Location-Info-Answer messages. Trigger: Increments when an LIA is timed out Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamauth-msg-liadropped	Description: Diameter Authentication Message Statistics - The total number of Location-Info-Answer messages dropped. Trigger: Increments when an LIA is dropped Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-rtreq	Description: Diameter Authentication Message Statistics - The total number of Registration-Termination-Request messages received. Trigger: Increments when an RTR is received Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-rtans	Description: Diameter Authentication Message Statistics - The total number of Registration-Termination-Answer messages sent. Trigger: Increments when an RTA is sent Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-rtreject	Description: Diameter Authentication Message Statistics - The total number of Registration-Termination-Request messages rejected. Trigger: Increments when an RTR is rejected. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-ppreq	Description: Diameter Authentication Message Statistics - The total number of Push-Profile-Request messages received. Trigger: Increments when a PPR is received. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-ppans	Description: Diameter Authentication Message Statistics - The total number of Push-Profile-Answer Messages Request messages sent. Trigger: Increments when a PPR is sent. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-ppreject	Description: Diameter Authentication Message Statistics - The total number of Push-Profile-Request messages rejected. Trigger: Increments when a PPR is rejected. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-dereq	Description: Diameter Authentication Message Statistics - The total number of Diameter-EAP-Request messages sent. Trigger: Increments when a DER is sent. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-deans	Description: Diameter Authentication Message Statistics - The total number of Diameter-EAP-Answer messages received. Trigger: Increments when a DEA is received. Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamauth-msg-deaaccept	Description: Diameter Authentication Message Statistics - The total number of Diameter-EAP-Answer messages accepted. Trigger: Increments when a DEA is received with Result-Code value as 2001. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-deareject	Description: Diameter Authentication Message Statistics - The total number of Diameter-EAP-Answer messages rejected. Trigger: Increments when a DEA is rejected. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-derretry	Description: Diameter Authentication Message Statistics - The total number of retries for Diameter-EAP-Request messages. Trigger: Increments when a DER is retried. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-deatimeout	Description: Diameter Authentication Message Statistics - The total number of timeouts of Diameter-EAP-Answer messages. Trigger: Increments when a DEA is timed out. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-deadropped	Description: Diameter Authentication Message Statistics - The total number of Diameter-EAP-Answer messages dropped. Trigger: Increments when a DEA is dropped. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-asr	Description: Diameter Authentication Message Statistics - The total number of Abort-Session-Request messages received. Trigger: Increments when an ASR is received. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-asa	Description: Diameter Authentication Message Statistics - The total number of Abort-Session-Answer messages sent. Trigger: Increments when an ASA is sent. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-rar	Description: Diameter Authentication Message Statistics - The total number of Re-Auth-Request messages received. Trigger: Increments when an RAR is received. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-raa	Description: Diameter Authentication Message Statistics - The total number of Re-Auth-Answer messages sent. Trigger: Increments when an RAA is sent. Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamauth-msg-str	Description: Diameter Authentication Message Statistics - The total number of Session-Termination-Request messages sent. Trigger: Increments when an STR is sent. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-sta	Description: Diameter Authentication Message Statistics - The total number of Session-Termination-Answer messages received. Trigger: Increments when an STA is received. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-msg-stretry	Description: Diameter Authentication Message Statistics - The total number of retries for Session-Termination-Request Messages. Trigger: Increments when an STR is retried Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-demsgerr-proto	Description: Diameter Authentication DE Message Error Statistics - The total number of error messages received with error Diameter Protocol Errors. Trigger: Increments when a DEA is received with 3xxx result-code. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-demsgerr-badans	Description: Diameter Authentication DE Message Error Statistics - The total number of error messages received with error Bad-Answer. Trigger: Increments when a DEA is received with malformed or wrong AVPs. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-demsgerr-unksessreq	Description: Diameter Authentication DE Message Error Statistics - The total number of error messages received with error Session-Id or unknown session values. Trigger: Increments when a DEA is received with unknown session-id. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-demsgerr-badreq	Description: Diameter Authentication DE Message Error Statistics - The total number of error messages received with bad request command code value. Trigger: Increments when a DEA is received with wrong command-code value. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-demsgerr-reqtmo	Description: Diameter Authentication DE Message Error Statistics - The total number of Request Timeout happened for DER message. Trigger: Increments when a DER is timed out. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-demsgerr-parse	Description: Diameter Authentication DE Message Error Statistics - The total number of parse failures happened for DEA message. Trigger: Increments when parse failure happens for DEA. Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamauth-demsgerr-requery	Description: Diameter Authentication DE Message Error Statistics - The total number of request retries happened for DER message. Trigger: Increments when a DER is retried Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-logout	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Diameter-Logout. Trigger: Increments when an STR is sent with Termination-Cause as Diameter-Logout. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-noserv	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Service-Not-Provided. Trigger: Increments when an STR is sent with Termination-Cause as Service-Not-Provided. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-badans	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Bad-Answer. Trigger: Increments when an STR is sent with Termination-Cause as Bad-Answer. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-admin	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Administrative. Trigger: Increments when an STR is sent with Termination-Cause as Administrative. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-linkbroken	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Link-Broken Trigger: Increments when an STR is sent with Termination-Cause as Link-Broken. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-authexp	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Auth-Expired. Trigger: Increments when an STR is sent with Termination-Cause as Auth-Expired. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-usermoved	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause User-Moved. Trigger: Increments when an STR is sent with Termination-Cause as User-Moved. Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamauth-strterm-sesstmo	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Session-Timeout. Trigger: Increments when an STR is sent with Termination-Cause as Session-Timeout. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-userreq	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause User-Request. Trigger: Increments when an STR is sent with Termination-Cause as User-Request. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-lostcarrier	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Lost Carrier. Trigger: Increments when an STR is sent with Termination-Cause as Lost-Carrier. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-lostsvc	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Lost Service. Trigger: Increments when an STR is sent with Termination-Cause as Lost-Service. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-idletmo	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Idle-Timeout. Trigger: Increments when an STR is sent with Termination-Cause as Idle-Timeout. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-nastmo	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause NAS Related Session-Timeout. Trigger: Increments when an STR is sent with Termination-Cause as NAS-Related-Session-Timeout. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-adminreset	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Admin-Reset. Trigger: Increments when an STR is sent with Termination-Cause as Admin-Reset. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-adminreboot	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Admin Reboot. Trigger: Increments when an STR is sent with Termination-Cause as Admin-Reboot. Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamauth-strterm-port	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Port Error. Trigger: Increments when an STR is sent with Termination-Cause as Port-Error. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-naserr	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause NAS Error. Trigger: Increments when an STR is sent with Termination-Cause as NAS-Error. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-nasreq	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause NAS Request. Trigger: Increments when an STR is sent with Termination-Cause as NAS-Request. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-nasreboot	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause NAS Reboot. Trigger: Increments when an STR is sent with Termination-Cause as NAS-Reboot. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-portunneed	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Port Unneeded. Trigger: Increments when an STR is sent with Termination-Cause as Port-Unneeded. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-portpreempt	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Port Preempted. Trigger: Increments when an STR is sent with Termination-Cause as Port-Preempted. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-portsusp	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Port Suspended. Trigger: Increments when an STR is sent with Termination-Cause as Port-Suspended. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-svcunavail	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Service Unavailable. Trigger: Increments when an STR is sent with Termination-Cause as Service-Unavailable. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-cback	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Callback. Trigger: Increments when an STR is sent with Termination-Cause as Callback. Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamauth-strterm-user	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause User-Error. Trigger: Increments when an STR is sent with Termination-Cause as User-Error. Availability: Per AAA Manager instance. Type: Counter	Int32
diamauth-strterm-hostreq	Description: Diameter Authentication STR Termination Cause Statistics - The total number of Session-Termination-Request messages with termination cause Host-Request. Trigger: Increments when an STR is sent with Termination-Cause as Host-Request. Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acreq	Description: Diameter Accounting Message Statistics - The total number of Accounting-Request messages sent. Trigger: Increments when an ACR is sent Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acans	Description: Diameter Accounting Message Statistics - The total number of Accounting-Answer messages received. Trigger: Increments when an ACA is received Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acrstart	Description: Diameter Accounting Message Statistics - The total number of Accounting-Request Start messages sent. Trigger: Increments when an ACR-START is sent Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acastart	Description: Diameter Accounting Message Statistics - The total number of Accounting-Answer Start messages received. Trigger: Increments when an ACA-START is received Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acrstartretry	Description: Diameter Accounting Message Statistics - The total number of retries for Accounting-Request Start messages. Trigger: Increments when an ACR-START is retried Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acastarttmo	Description: Diameter Accounting Message Statistics - The total number of timeouts of Accounting-Answer Start messages. Trigger: Increments when an ACA-START is timed out Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acrinterim	Description: Diameter Accounting Message Statistics - The total number of Accounting-Request Interim messages sent. Trigger: Increments when an ACR-INTERIM is sent Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamacct-msg-acainterim	Description: Diameter Accounting Message Statistics - The total number of Accounting-Answer Interim messages received. Trigger: Increments when an ACA-INTERIM is received Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acrinterimretry	Description: Diameter Accounting Message Statistics - The total number of retries for Accounting-Request Interim messages. Trigger: Increments when an ACR-INTERIM is retried Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acainterimtmo	Description: Diameter Accounting Message Statistics - The total number of timeouts of Accounting-Answer Interim messages. Trigger: Increments when an ACA-INTERIM is timed out Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acrevent	Description: Diameter Accounting Message Statistics - The total number of Accounting-Request Event messages sent. Trigger: Increments when an ACR-EVENT is sent Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acaevent	Description: Diameter Accounting Message Statistics - The total number of Accounting-Answer Event messages received. Trigger: Increments when an ACA-EVENT is received Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acrstop	Description: Diameter Accounting Message Statistics - The total number of Accounting-Request Stop messages sent. Trigger: Increments when an ACR-STOP is sent. Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acastop	Description: Diameter Accounting Message Statistics - The total number of Accounting-Answer Stop messages received. Trigger: Increments when an ACR-STOP is received. Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acrstopretry	Description: Diameter Accounting Message Statistics - The total number of retries for Accounting-Request Stop messages. Trigger: Increments when an ACR-STOP is retried. Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-msg-acastoptmo	Description: Diameter Accounting Message Statistics - The total number of timeouts of Accounting-Answer Stop messages. Trigger: Increments when an ACA-STOP is timed out Availability: Per AAA Manager instance. Type: Counter	Int32

Variables	Description	Data Type
diamacct-msg-acadropped	Description: Diameter Accounting Message Statistics - The total number of Accounting-Answer messages dropped. Trigger: Increments when an ACA is dropped. Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-acmsgerr-proto	Description: Diameter Accounting Message Error Statistics - The total number of error messages received with error Diameter Protocol Errors. Trigger: Increments when an ACA is received with Result-Code value as 3xxx. Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-acmsgerr-badans	Description: Diameter Accounting Message Error Statistics - The total number of error messages received with error Bad-Answer. Trigger: Increments when an ACA is received with malformed or wrong AVPs. Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-acmsgerr-unksessreq	Description: Diameter Accounting Message Error Statistics - The total number of error messages received with error Session-Id or unknown session values. Trigger: Increments when an ACA is received with unknown session-id Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-acmsgerr-reqtmo	Description: Diameter Accounting Message Error Statistics - The total number of ACRs that are timed out. Trigger: Increments when an ACR is timed out. Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-acmsgerr-parse	Description: Diameter Accounting Message Error Statistics - The total number of parse failures happened for ACR message. Trigger: Increments when parse failure happens for ACR. Availability: Per AAA Manager instance. Type: Counter	Int32
diamacct-acmsgerr-reqretry	Description: Diameter Accounting Message Error Statistics - The total number of request retries happened for ACR message. Trigger: Increments when an ACR is retried. Availability: Per AAA Manager instance. Type: Counter	Int32
a11-ttlarrived	Description: The total number of sessions for all A11 Managers that were received. Type: Counter	Int32
a11-ttlrejected	Description: The total number of sessions for all A11 Managers that were rejected. Type: Counter	Int32
a11-ttlidemult	Description: The total number of sessions that were successfully setup for all A11 Managers. Type: Counter	Int32

Variables	Description	Data Type
all-ttldereg	Description: The total number of sessions for all A11 Managers that were successfully de-registered, or disconnected. Type: Counter	Int32
all-curactive	Description: The number of active sessions currently being facilitated by all A11 Managers. Type: Gauge	Int32
fa-ttlarrived	Description: The total number of session requests that arrived for all FA Managers. Type: Counter	Int32
fa-ttlrejected	Description: The total number of sessions for all FA Managers that were rejected. Type: Counter	Int32
fa-ttlsetup	Description: The total number of sessions for all FA Managers that were successfully setup. Type: Counter	Int32
fa-ttldereg	Description: The total number of sessions for all FA Managers that were successfully de-registered or disconnected. Type: Counter	Int32
fa-curactive	Description: The number of active sessions currently being facilitated by all FA Managers. Type: Gauge	Int32
ha-ttlarrived	Description: The total number of session requests that arrived for all HA Managers. Type: Counter	Int32
ha-ttlrejected	Description: The total number of sessions for all HA Managers that were rejected. Type: Counter	Int32
ha-ttlsetup	Description: The total number of sessions for all HA Managers that were successfully setup. Type: Counter	Int32
ha-ttldereg	Description: The total number of sessions for all HA Managers that were successfully de-registered, or disconnected. Type: Counter	Int32
ha-curactive	Description: The number of active sessions currently being facilitated by all HA Managers. Type: Gauge	Int32
pdif-cursess	Description: The number of Credit Control Application (CCA) sessions currently active. Type: Gauge	Int32
pdif-curactive	Description: The number of active sessions currently being facilitated by PDIF. Type: Gauge	Int32
pdif-curdormant	Description: The number of dormant sessions currently being facilitated by PDIF. Type: Gauge	Int32
pdif-ttlsetup	Description: The total number of PDIF sessions on a system. Type: Counter	Int32

Variables	Description	Data Type
pdif-curchildsa	Description: The number of current child SAs Type: Gauge	Int32
sess-15peak-curactcall	Description: The number of current calls (active only). Peak values represent the highest sample seen over the last 15 minutes. Type: Gauge	Int32
sess-15peak-curttlcall	Description: The number of current calls. Peak values represent the highest sample seen over the last 15 minutes. Type: Gauge	Int32
sess-cursipactive	Description: The number of Simple IP sessions currently active. Type: Gauge	Int32
sess-15peak-cursipactive	Description: The number of Simple IP sessions currently active. Peak values represent the highest sample seen over the last 15 minutes. Type: Gauge	Int32
sess-curmipactive	Description: The number of Mobile IP sessions currently active. Type: Gauge	Int32
sess-15peak-curmipactive	Description: The number of currently active Mobile IP sessions. Peak values represent the highest sample seen over the last 15 minutes. Type: Gauge	Int32
a11-15peak-curactive	Description: Peak active A11 sessions (a11-curactive) over the last 15 minutes. Type: Gauge	Int32
crp-curactive	Description: Current number of active Closed RP calls. Type: Gauge	Int32
crp-15peak-curactive	Description: Peak active Closed-RP calls (crp-curactive) over the last 15 minutes. Type: Gauge	Int32
fa-15peak-curactive	Description: The number of FA sessions currently active. Peak values represent the highest sample seen over the last 15 minutes. Type: Gauge	Int32
ha-15peak-curactive	Description: The number of HA sessions currently active. Peak values represent the highest sample seen over the last 15 minutes. Type: Gauge	Int32
flow-15peak-curdynamic	Description: Peak flows (flow-curdynamic) over the last 15 minutes. Type: Gauge	Int32
sess-15min-usageactive	Description: Total minute usage by all the active sessions over the last 15 minutes. Type: Gauge	Int32
sess-15min-usageall	Description: Total minute usage by all flows over the last 15 minutes. Type: Gauge	Int32
pdp-ctx-15peak-active	Description: The number of peak active simultaneous PDP contexts over the last 15 minutes. This is sum of SGSN and GGSN service sessions on a system. Type: Gauge	Int32

Variables	Description	Data Type
pdp-ctx-5peak-active	Description: The number of peak active simultaneous PDP contexts over the last 5 minutes. This is sum of SGSN and GGSN service sessions on a system. Type: Gauge	Int32
cc-cursess	Description: The total number of Credit Control Application (CCA) sessions currently active. Trigger: Increments when a Gy session is successfully created Decrements when the Gy session is terminated Availability: Per Credit Control Group Type: Gauge	Int64
cc-ttlecsadd	Description: The total number of ECS sessions added to CCA. Trigger: Increments when a new CC session is being created by ECS. Availability: Per Credit Control Group Type: Counter	Int64
cc-ttlstart	Description: The total number of CCA sessions started. Trigger: Increments when CCR-I is successfully sent. Availability: Per Credit Control Group Type: Counter	Int64
cc-ttlsessupd	Description: The total number of CCA sessions updated. Trigger: Increments when a CC session update is sent by ECS to DCCA module. Availability: Per Credit Control Group Type: Counter	Int64
cc-ttlterm	Description: The total number of CCA sessions terminated. Trigger: Increments when a CC session terminate is sent by ECS to DCCA module. Availability: Per Credit Control Group Type: Counter	Int64
cc-sessfailover	Description: The total number of CCA sessions failed. Trigger: Increments when a CC session message is retried on a secondary server due to session failover. Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-recv	Description: The total number of CCA messages received. Trigger: Increments when a CCA message is successfully received Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-sent	Description: The total number of CCA messages sent. Trigger: Increments when a CCA message is successfully sent to the server Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-request	Description: The total number of CCR (Credit Control Request) messages that are sent out from the system to the Diameter Server. The CCR can be Initial/Update or Terminate. Trigger: Increments when CCR (Credit Control Request) message is sent out from system to the Diameter Server Availability: Per Credit Control Group Type: Counter	Int64

Variables	Description	Data Type
cc-msg-answer	Description: The total number of CCA (Credit Control Answer) messages that are received by the system from the Diameter Server. Trigger: Increments when CCA message is received Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccrinit	Description: The total number of CCR-Initial (Initial Credit Control Request) messages that are sent out from the system to the Diameter Server. Trigger: Increments when CCR-I message is successfully sent Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccainit	Description: The total number of CCA-Initial (Initial Credit Control Answer) messages that are received by the system from the Diameter Server. Trigger: Increments when CCA-I message is successfully received Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccainitaccept	Description: The total number of CCA-Initial (Initial Credit Control Answer) messages that are sent from Diameter Server and accepted by the system Trigger: Increments when a CCA-Initial message from Diameter Server is accepted by the system Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccainitreject	Description: The total number of CCA-Initial (Initial Credit Control Answer sent) messages that are sent from Diameter Server and rejected by the system Trigger: Increments when a CCA-Initial (Initial Credit Control Answer sent) message from Diameter Server is rejected by system Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccainitimeout	Description: The total number of CCA-Initial-Timeouts (CCR-I sent but did not receive CCA till the timer expired) messages that are sent to the system from Diameter Server. Trigger: Increments when CCR-I is sent but CCA-I is not received till Tx timer expiry. Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccrupdate	Description: The total number of CCR-Updates (Credit Control Request with Update) messages that are sent out from the system to the Diameter Server. Trigger: Increments whenever a CCR-Update request is successfully sent from the system. Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccaupdate	Description: The total number of CCA-Update (Credit Control Answer for update) messages that are received by the system from the Diameter Server. Trigger: Increments whenever an update answer message is received from the server. Availability: Per Credit Control Group Type: Counter	Int64

Variables	Description	Data Type
cc-msg-ccaupdatetimerout	Description: The total number of CCA-Update Timeouts (CCR-U sent but did not receive CCA till the timer expired) messages that are sent to the system from Diameter Server. Trigger: Increments when CCR-U is sent but an answer for this request is not received till Tx timer expiry. Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccrfinal	Description: The total number of CCR-Final (Credit Control Request with Final) messages that are sent out from the system to the Diameter Server. Trigger: Increments whenever a CCR-Terminate request for a session is successfully sent from the system Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccafinal	Description: The total number of CCA-Final (Credit Control Answer for final update sent) messages that are received by the system from Diameter Server. Trigger: Increments when the system receives answer message (CCA-T) for Terminate request that was sent Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccafinaltimeout	Description: The total number of CCA-Final Timeouts (CCR-T sent but did not receive CCA till the timer expired) messages that are received by the system from Diameter Server. Trigger: Increments when CCR-T is sent but an answer for this request is not received till Tx timer expiry. Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-asr	Description: The total number of Abort Session Request messages that are sent from the Diameter Server to the system. Trigger: Increments when the system receives answer message (CCA-T) for Terminate request that was sent Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-asa	Description: The total number of Abort Session Answer messages sent from the system to the Diameter server. This message will be followed by a CCR-Terminate to terminate the session. Trigger: Increments when the system replies with an Abort Session Answer message for the Abort Session Request message sent from Diameter Server Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-rar	Description: The total number of ReAuth Request messages that are sent from the Diameter Server to the system. Trigger: Increments when a Re-Authorization Request message is sent from Diameter Server Availability: Per Credit Control Group Type: Counter	Int64

Variables	Description	Data Type
cc-msg-raa	Description: The total number of ReAuth Answer messages sent from the system to the Diameter server. This message is followed by a CCR-Update to update the Diameter server about the session. Trigger: Increments when the system replies with a Re-auth Answer message for the Re-Auth Request sent from Diameter Server Availability: Per Credit Control Group Type: Counter	Int64
cc-msg-ccdropped	Description: The total number of CCA (Credit Control Answer) messages dropped by the system. Trigger: Increments when the system drops/ignores a CCA message received from the server Availability: Per Credit Control Group Type: Counter	Int64
cc-msgerr-proto	Description: The total message errors due to Diameter protocol. Trigger: Increments whenever a message with result-codes 3xxx - errors due to Diameter protocol is received from the server Availability: Per Credit Control Group Type: Counter	Int64
cc-msgerr-badanswer	Description: The total message errors due to invalid response - CCA Parse error. Trigger: Increments when the system receives an undefined mandatory AVP from the server Availability: Per Credit Control Group Type: Counter	Int64
cc-msgerr-unknownsess	Description: The total message errors due to invalid session requests. Trigger: Increments for every occurrence of invalid session request message Availability: Per Credit Control Group Type: Counter	Int64
cc-msgerr-unknowncomm	Description: The total message errors due to invalid/unknown command code (CCA, ASR, RAR). Trigger: Increments whenever a response is received for a valid request with corrupted Command Code. Availability: Per Credit Control Group Type: Counter	Int64
cc-msgerr-reqtimeout	Description: The total message errors due to request timeout. Trigger: Increments whenever a request message is timed-out Availability: Per Credit Control Group Type: Counter	Int64
cc-msgerr-parse	Description: The total message errors due to parsing errors. Trigger: Increments whenever a message is received with parsing errors Availability: Per Credit Control Group Type: Counter	Int64

Variables	Description	Data Type
cc-msgerr-unkratinggrp	Description: The total message errors due to invalid/unknown Rating Groups. Rating group is used to identify a particular type of traffic. Trigger: Increments when Unknown Rating-Group is preemptively received from server or a preemptive MSCC is received after session abortion Availability: Per Credit Control Group Type: Counter	Int64
cc-msgerr-unkrulebase	Description: The total message errors due to invalid/unknown Rulebase applied. Trigger: Increments when rulebase change is attempted and the system is not able to switch to this because the plan indicated might be unknown/invalid. Availability: Per Credit Control Group Type: Counter	Int64
cc-msgerr-unkfailure	Description: The total number of unknown server -provided session failover actions. This counts the number of unknown server-provided session failover actions. Trigger: Increments when an unknown CCFH action is received from the server (terminate/continue/retry and terminate are considered to be valid CCFH values) Availability: Per Credit Control Group Type: Counter	Int64
cc-upd-threshold	Description: For each Rating group, the Diameter server sends a threshold (this is also configurable in the system) after which an update needs to be sent. For example, a subscriber quota of 1000 bytes with 900 as a threshold is sent to CCA. When 900 bytes have been used by the system, an update message is sent for quota. This counter gives the number of updates sent because of the threshold. Trigger: Increments whenever threshold value for a quota-type allocated to any rating-group is reached and an update request is sent to the server to report the usage. Availability: Per Credit Control Group Type: Counter	Int64
cc-upd-qht	Description: The total number of updates sent due to expiry of Quota Hold Timer (QHT). Trigger: Increments when updates are sent due to QHT expiry Availability: Per Credit Control Group Type: Counter	Int64
cc-upd-final	Description: The total number of updates sent due to exhaustion/invalidation/service denial. Trigger: Increments when updates are sent due to quota exhaustion/invalidation/service denial. Availability: Per Credit Control Group Type: Counter	Int64
cc-upd-quotaexhaust	Description: The total number of updates sent due to exhaustion of subscriber quota. Trigger: Increments when updates are sent because the quota for a particular rating-group is exhausted Availability: Per Credit Control Group Type: Counter	Int64
cc-upd-validitytime	Description: The total number of updates sent due to expiry of the session validity time. Trigger: Increments when updates are sent due to validity time expiry for a rating-group Availability: Per Credit Control Group Type: Counter	Int64

Variables	Description	Data Type
cc-upd-otherquota	Description: The total number of updates sent to report the usage of one quota type, while the other quota reached a trigger condition. Trigger: Increments when updates are sent to report the usage of one quota type, while the other quota reached a trigger condition Availability: Per Credit Control Group Type: Counter	Int64
cc-upd-ratingchange	Description: The total number of updates sent due to changes in RAT/QOS/SGSN/CELLID/LAC. Trigger: Increments when updates are sent due to changes in RAT/QOS/SGSN/CELLID/LAC Availability: Per Credit Control Group Type: Counter	Int64
cc-upd-forcedreauth	Description: The total number of updates sent because of RAR. Trigger: Increments when the server asks for forced-reauthorization of the subscriber and sends the update request Availability: Per Credit Control Group Type: Counter	Int64
cc-upd-titsutime	Description: The total number of updates sent due to time interval after tariff switch. This is specific to WiMax prepaid customers. Trigger: Increments when updates are sent due to time interval after tariff switch Availability: Per Credit Control Group Type: Counter	Int64
cc-term-diamlogout	Description: The total number of CCA sessions terminated due to subscriber logout. Trigger: Increments when a subscriber initiates termination of a Diameter session Availability: Per Credit Control Group Type: Counter	Int64
cc-term-servnotprov	Description: The total number of CCA sessions terminated due to unavailability of service. Trigger: Increments when a session is terminated due to unavailability of Diameter service Availability: Per Credit Control Group Type: Counter	Int64
cc-term-badanswer	Description: The total number of CCA sessions terminated due to invalid/unknown response received. Trigger: Increments when a session is terminated due to invalid/unknown/unsuccessful response received Availability: Per Credit Control Group Type: Counter	Int64
cc-term-admin	Description: The total number of CCA sessions terminated by an administrative user. Trigger: Increments when a session termination is done by the system - administrative decision taken by our system in relevant scenarios Availability: Per Credit Control Group Type: Counter	Int64

Variables	Description	Data Type
cc-term-linkbroken	Description: The total number of CCA sessions terminated due to broken uplink/downlink (connection between peers). Trigger: Increments when a session is terminated because the connection between peers is lost - Diameter link is broken. Availability: Per Credit Control Group Type: Counter	Int64
cc-term-authexpired	Description: The total number of CCA sessions terminated due to expiry of subscriber authorization. Trigger: Increments when an update is sent to check for the expiry of lifetime authorization of the subscriber and if the server indicates expiry of authorization, the session will be terminated. Availability: Per Credit Control Group Type: Counter	Int64
cc-term-usermoved	Description: The total number of CCA sessions terminated as subscriber moved out of the service area. Trigger: Increments when session termination happens because the subscriber has moved out of the service area. Availability: Per Credit Control Group Type: Counter	Int64
cc-term-sesstimeout	Description: The total number of CCA sessions terminated due to timeout. Trigger: Increments when a session terminates because the session manager has indicated a session-timeout. Availability: Per Credit Control Group Type: Counter	Int64
cc-badans-auth-appid	Description: The absence or unexpected value in Auth-Application-Id AVP. Trigger: Increments when a session is terminated because of Diameter bad answer due to absence or unexpected value of Auth-Application-Id AVP. Availability: Per Credit Control Group Type: Counter	Int64
cc-badans-sessid	Description: The absence or unexpected value in Session-Id AVP. Trigger: Increments when a session is terminated because of Diameter bad answer due to absence or unexpected value of Session-id AVP Availability: Per Credit Control Group Type: Counter	Int64
cc-badans-cc-req-num	Description: The absence or unexpected value in CC-Request-Number AVP. Trigger: Increments when a session is terminated because of Diameter bad answer due to absence or unexpected value of CC-Request-Number AVP Availability: Per Credit Control Group Type: Counter	Int64
cc-badans-cc-req-type	Description: The absence or unexpected value in CC-Request-Type AVP. Trigger: Increments when a session is terminated because of Diameter bad answer due to absence or unexpected value of CC-Request-Type AVP Availability: Per Credit Control Group Type: Counter	Int64

Variables	Description	Data Type
cc-badans-origin-host	Description: The absence of Origin-Host AVP. Trigger: Increments when a session is terminated because of Diameter bad answer due to absence or unexpected value of Origin-Host AVP Availability: Per Credit Control Group Type: Counter	Int64
cc-badans-origin-realm	Description: The absence of Origin-Realm AVP. Trigger: Increments when a session is terminated because of Diameter bad answer due to absence or unexpected value of Origin-Realm AVP Availability: Per Credit Control Group Type: Counter	Int64
cc-badans-parsemsg-err	Description: The number of parse errors in the message. Trigger: Increments when a session is terminated because of Diameter bad answer due to parsing errors in the message Availability: Per Credit Control Group Type: Counter	Int64
cc-badans-parsemscc-err	Description: The number of parse errors in MSCC AVP. Trigger: Increments when a session is terminated because of Diameter bad answer due to parsing errors detected while processing the Multiple-Services-Credit-Control AVP in the message Availability: Per Credit Control Group Type: Counter	Int64
cc-badans-misc-err	Description: The number of other miscellaneous errors. Trigger: Increments when a session is terminated because of Diameter bad answer due to miscellaneous reasons like failure installing the rulebase change/bandwidth/firewall policy, etc. Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-catcreate	Description: The total traffic categories (MSCC) created. Trigger: Increments when a new MSCC is created. Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-catdelete	Description: The total traffic categories (MSCC) deleted. Trigger: Increments whenever an MSCC is deleted in an ongoing session. Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-catlookup	Description: The total traffic categories/MSCC lookups failed. Trigger: Increments when a lookup operation is performed in the list of MSCCs. Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-hits	Description: The total traffic categories/MSCC lookups successful. Trigger: Increments when a lookup of MSCC is successful Availability: Per Credit Control Group Type: Counter	Int64

Variables	Description	Data Type
cc-traf-misses	Description: The total traffic categories triggered/MSCC lookups failed. Trigger: Increments when a lookup operation for a particular MSCC fails. Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-triggerevent	Description: The total triggers for traffic categories/MSCCs. Trigger: Increments whenever there is a change in certain trigger parameters like RAT, SGSN-IP-ADDRESS, QOS, CELLID, etc. Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-finalunit	Description: The total final-units-actions taken on MSCCs. Trigger: Increments whenever FUI action is imposed on a particular rating group. Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-catsuccess	Description: The total number of successful allocation of credits for traffic category/MSCC (result-code 2001). Trigger: Increments when the server responds with result-code 2001 indicating successful allocation of credits for traffic category Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-ratingfail	Description: The total number of quota retries because of rating failure due to category not recognized (result-code 5031). Trigger: Increments when the server responds with result-code 5031 indicating rating failure due to category not recognized Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-servdenied	Description: The total number of quota retries due to denial of end user service (result-code 4010). Trigger: Increments when the server responds with result-code 4010 indicating end user service denial. Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-limitreached	Description: The total number of retries due to credit limit reached (result-code 4012). Trigger: Increments when the server responds with result-code 4012 indicating that the credit limit has reached Availability: Per Credit Control Group Type: Counter	Int64
cc-traf-authreject	Description: The total number of retries due to authorization rejected (result-code 5003). Trigger: Increments when the server responds with result-code 5003 indicating authorization rejection. Availability: Per Credit Control Group Type: Counter	Int64

Variables	Description	Data Type
cc-traf-othererror	Description: The total number of miscellaneous/unknown errors not specified by the system (Diameter_unable_to_comply[result-code 5012]). Trigger: Increments when the server responds with result-code 5012 indicating miscellaneous/unknown errors not specified by the system Availability: Per Credit Control Group Type: Counter	Int64
Content Filtering In-line Service - URL Blacklisting related statistics		
url-blacklisting-hits	Description: The total number of blacklisted URL hits of all the configured billing plans. Trigger: Increments when a URL is found in the BL DB (stored as BL cache at ACSMgr). Availability: Per Active Charging Service. Type: Counter	Int64
url-blacklisting-misses	Description: The total number of blacklisted URL misses of all the configured billing plans. Trigger: Increments when a URL is not found in the BL DB (stored as BL cache at ACSMgr). Availability: Per Active Charging Service. Type: Counter	Int64
Content Filtering In-line Service - Category-based content filtering related statistics		
cf-static-ratereq	Description: The total number of static rating requests. Trigger: Increments when a request arrives at any SRDB for static rating. Availability: Per Active Charging Service. Type: Counter	Int64
cf-static-ratesucc	Description: The total number of “successful” response for static rating requests. Trigger: Increments when a “successful” response is sent for static rating requests from SRDBs. Availability: Per Active Charging Service. Type: Counter	Int64
cf-static-rateblock	Description: The total number of “blocked” response for static rating requests. Trigger: Increments when a “blocked” response is sent for static rating requests from SRDBs. Availability: Per Active Charging Service. Type: Counter	Int64
cf-static-ratefail	Description: The total number of “failed” response for static rating requests. Trigger: Increments when an SRDB fails to send a response for static rating requests. Availability: Per Active Charging Service. Type: Counter	Int64
cf-static-ratefail-nr	Description: The total number of “failed” response for static requests due to no rating in database. Trigger: Increments when an SRDB fails to send a response for static rating requests, due to no rating in database. Availability: Per Active Charging Service. Type: Counter	Int64

Variables	Description	Data Type
cf-static-ratefail-notindb	Description: The total number of “failed” response for static requests due to no listing in database. Trigger: Increments when an SRDB fails to send a response for static rating requests, due to no listing in database. Availability: Per Active Charging Service. Type: Counter	Int64
cf-dyn-ratereq	Description: The total number of dynamic rating requests. Trigger: Increments when a request arrives at any SRDB for dynamic rating. Availability: Per Active Charging Service. Type: Counter	Int64
cf-dyn-ratesucc	Description: The total number of “successful” response for dynamic rating requests. Trigger: Increments when a “successful” response is sent for dynamic rating requests from SRDBs. Availability: Per Active Charging Service. Type: Counter	Int64
cf-dyn-ratefail	Description: The total number of “failed” response for dynamic rating requests. Trigger: Increments when an SRDB fails to send a response for dynamic rating requests. Availability: Per Active Charging Service. Type: Counter	Int64
cf-cache-hits	Description: The total number of URLs that get a hit (found) in the CF cache. Trigger: Increments when a URL is found in the CF cache. Availability: Per Active Charging Service. Type: Counter	Int64
cf-cache-misses	Description: The total number of URLs that get a miss (not found) in the CF cache. Trigger: Increments when a URL is not found in the CF cache. Availability: Per Active Charging Service. Type: Counter	Int64
cf-cache-has-path-hits	Description: The total number of URLs whose domain_name entries are found in the CF cache based, and haspath bit was not set in the domain_name entry. I.e., no extended URLs are present in the SRDB for those domain_name URLs, so there is no need to go for rating. Trigger: Increments when a URL (whose domain_name entry is found in the CF cache) does not have its haspath bit set in the domain_name entry. That is, no extended URLs are present in the SRDB for that domain_name URL, so there is no need to go for rating. Availability: Per Active Charging Service. Type: Counter	Int64
cf-cache-flushes	Description: The total number of URLs that are flushed from the CF cache. Trigger: Increments when a URL is flushed from the CF cache. Availability: Per Active Charging Service. Type: Counter	Int64
cf-ratereq	Description: The total number of rating requests. Trigger: Increments when a static or dynamic request is sent to SRDB for rating. Availability: Per Active Charging Service. Type: Counter	Int64

Variables	Description	Data Type
cf-ratesucc	Description: The total number of “successful” responses against all rating requests. Trigger: Increments when a “successful” response is sent for static or dynamic rating requests from SRDBs. Availability: Per Active Charging Service. Type: Counter	Int64
cf-rateblock	Description: The total number of “blocked” responses against all rating requests. Trigger: Increments when a “blocked” response is sent for static rating requests from SRDBs. Availability: Per Active Charging Service. Type: Counter	Int64
cf-ratefail	Description: The total number of “failed” response against all rating requests. Trigger: Increments when an SRDB fails to send a response for static or dynamic rating requests. Availability: Per Active Charging Service. Type: Counter	Int64
cf-ttlsub	Description: The total number of CF subscribers. Trigger: Increments when a subscriber enables CF policy. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cursub	Description: The current number of CF subscribers. Trigger: Increments when a subscriber enables CF policy. Decrements when the call is aborted. Availability: Per Active Charging Service. Type: Gauge	Int32
cf-cat-abor-pkts-hit	Description: The total number of packets from sites with CF category “abortion” accessed. Trigger: Increments whenever a packet from sites with CF category “abortion” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-abor-pkts-block	Description: The total number of packets from sites with CF category “abortion” blocked. Trigger: Increments whenever a packet from sites with CF category “abortion” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-adult-pkts-hit	Description: The total number of packets from sites with CF category “adult” accessed. Trigger: Increments whenever a packet from sites with CF category “adult” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-adult-pkts-block	Description: The total number of packets from sites with CF category “adult” blocked. Trigger: Increments whenever a packet from sites with CF category “adult” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-advert-pkts-hit	Description: The total number of packets from sites with CF category “advertising site” accessed. Trigger: Increments whenever a packet from sites with CF category “advertising site” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-advert-pkts-block	Description: The total number of packets from sites with CF category “advertising site” blocked. Trigger: Increments whenever a packet from sites with CF category “advertising site” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-anon-pkts-hit	Description: The total number of packets from sites with CF category “anonymous” accessed. Trigger: Increments whenever a packet from sites with CF category “anonymous” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-anon-pkts-block	Description: The total number of packets from sites with CF category “anonymous” blocked. Trigger: Increments whenever a packet from sites with CF category “anonymous” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-art-pkts-hit	Description: The total number of packets from sites with CF category “art” accessed. Trigger: Increments whenever a packet from sites with CF category “art” is accessed. Availability: Per Active Charging Service.	Int32
cf-cat-art-pkts-block	Description: The total number of packets from sites with CF category “art” blocked. Trigger: Increments whenever a packet from sites with CF category “art” is blocked. Availability: Per Active Charging Service.	Int32
cf-cat-auto-pkts-hit	Description: The total number of packets from sites with CF category “auto” accessed. Trigger: Increments whenever a packet from sites with CF category “auto” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-auto-pkts-block	Description: The total number of packets from sites with CF category “auto” blocked. Trigger: Increments whenever a packet from sites with CF category “auto” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-backup-pkts-hit	Description: The total number of packets from sites with CF category “backup” accessed. Trigger: Increments whenever a packet from sites with CF category “backup” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-backup-pkts-block	Description: The total number of packets from sites with CF category “backup” blocked. Trigger: Increments whenever a packet from sites with CF category “backup” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-black-pkts-hit	Description: The total number of packets from sites with CF category “black” accessed. Trigger: Increments whenever a packet from sites with CF category “black” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-black-pkts-block	Description: The total number of packets from sites with CF category “black” blocked. Trigger: Increments whenever a packet from sites with CF category “black” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-blog-pkts-hit	Description: The total number of packets from sites with CF category “blog” accessed. Trigger: Increments whenever a packet from sites with CF category “blog” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-blog-pkts-block	Description: The total number of packets from sites with CF category “blog” blocked. Trigger: Increments whenever a packet from sites with CF category “blog” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-busi-pkts-hit	Description: The total number of packets from sites with CF category “business” accessed. Trigger: Increments whenever a packet from sites with CF category “business” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-busi-pkts-block	Description: The total number of packets from sites with CF category “business” blocked. Trigger: Increments whenever a packet from sites with CF category “business” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-car-pkts-hit	Description: The total number of packets from sites with CF category “career” accessed. Trigger: Increments whenever a packet from sites with CF category “career” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-car-pkts-block	Description: The total number of packets from sites with CF category “career” blocked. Trigger: Increments whenever a packet from sites with CF category “career” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-cdn-pkts-hit	Description: The total number of packets from sites with CF category “cdn” accessed. Trigger: Increments whenever a packet from sites with CF category “cdn” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-cdn-pkts-block	Description: The total number of packets from sites with CF category “cdn” blocked. Trigger: Increments whenever a packet from sites with CF category “cdn” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-chat-pkts-hit	Description: The total number of packets from sites with CF category “chat” accessed. Trigger: Increments whenever a packet from sites with CF category “chat” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-chat-pkts-block	Description: The total number of packets from sites with CF category “chat” blocked. Trigger: Increments whenever a packet from sites with CF category “chat” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-cmc-pkts-hit	Description: The total number of packets with CF category “virtual community” accessed. Trigger: Increments whenever a packet from sites with CF category “virtual community” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-cmc-pkts-block	Description: The total number of packets with CF category “virtual community” blocked. Trigger: Increments whenever a packet from sites with CF category “virtual community” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-crime-pkts-hit	Description: The total number of packets from sites with CF category “crime” accessed. Trigger: Increments whenever a packet from sites with CF category “crime” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-crime-pkts-block	Description: The total number of packets from sites with CF category “crime” blocked. Trigger: Increments whenever a packet from sites with CF category “crime” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-cult-pkts-hit	Description: The total number of packets from sites with CF category “cult” accessed. Trigger: Increments whenever a packet from sites with CF category “cult” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-cult-pkts-block	Description: The total number of packets from sites with CF category “cult” blocked. Trigger: Increments whenever a packet from sites with CF category “cult” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-drug-pkts-hit	Description: The total number of packets from sites with CF category “drug” accessed. Trigger: Increments whenever a packet from sites with CF category “drug” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-drug-pkts-block	Description: The total number of packets from sites with CF category “drug” blocked. Trigger: Increments whenever a packet from sites with CF category “drug” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-dynam-pkts-hit	Description: The total number of packets from sites with CF category “dynamic content” accessed. Trigger: Increments whenever a packet from sites with CF category “dynamic content” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-dynam-pkts-block	Description: The total number of packets from sites with CF category “dynamic content” blocked. Trigger: Increments whenever a packet from sites with CF category “dynamic content” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-edu-pkts-hit	Description: The total number of packets from sites with CF category “education” accessed. Trigger: Increments whenever a packet from sites with CF category “education” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-edu-pkts-block	Description: The total number of packets from sites with CF category “education” blocked. Trigger: Increments whenever a packet from sites with CF category “education” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-energy-pkts-hit	Description: The total number of packets from sites with CF category “energy” accessed. Trigger: Increments whenever a packet from sites with CF category “energy” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-energy-pkts-block	Description: The total number of packets from sites with CF category “energy” blocked. Trigger: Increments whenever a packet from sites with CF category “energy” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-ent-pkts-hit	Description: The total number of packets from sites with CF category “entertainment” accessed. Trigger: Increments whenever a packet from sites with CF category “entertainment” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-ent-pkts-block	Description: The total number of packets from sites with CF category “entertainment” blocked. Trigger: Increments whenever a packet from sites with CF category “entertainment” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-fin-pkts-hit	Description: The total number of packets from sites with CF category “finance” accessed. Trigger: Increments whenever a packet from sites with CF category “finance” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-fin-pkts-block	Description: The total number of packets from sites with CF category “finance” blocked. Trigger: Increments whenever a packet from sites with CF category “finance” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-forum-pkts-hit	Description: The total number of packets from sites with CF category “forum” accessed. Trigger: Increments whenever a packet from sites with CF category “forum” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-forum-pkts-block	Description: The total number of packets from sites with CF category “forum” blocked. Trigger: Increments whenever a packet from sites with CF category “forum” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-gamb-pkts-hit	Description: The total number of packets from sites with CF category “gambling” accessed. Trigger: Increments whenever a packet from sites with CF category “gambling” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-gamb-pkts-block	Description: The total number of packets from sites with CF category “gambling” blocked. Trigger: Increments whenever a packet from sites with CF category “gambling” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-game-pkts-hit	Description: The total number of packets from sites with CF category “game” accessed. Trigger: Increments whenever a packet from sites with CF category “game” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-game-pkts-block	Description: The total number of packets from sites with CF category “game” blocked. Trigger: Increments whenever a packet from sites with CF category “game” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-glam-pkts-hit	Description: The total number of packets from sites with CF category “glamour” accessed. Trigger: Increments whenever a packet from sites with CF category “glamour” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-glam-pkts-block	Description: The total number of packets from sites with CF category “glamour” blocked. Trigger: Increments whenever a packet from sites with CF category “glamour” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-govern-pkts-hit	Description: The total number of packets from sites with CF category “government” accessed. Trigger: Increments whenever a packet from sites with CF category “government” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-govern-pkts-block	Description: The total number of packets from sites with CF category “government” blocked. Trigger: Increments whenever a packet from sites with CF category “government” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-hack-pkts-hit	Description: The total number of packets from sites with CF category “hacker” accessed. Trigger: Increments whenever a packet from sites with CF category “hacker” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-hack-pkts-block	Description: The total number of packets from sites with CF category “hacker” blocked. Trigger: Increments whenever a packet from sites with CF category “hacker” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-hate-pkts-hit	Description: The total number of packets from sites with CF category “hate” accessed. Trigger: Increments whenever a packet from sites with CF category “hate” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-hate-pkts-block	Description: The total number of packets from sites with CF category “hate” blocked. Trigger: Increments whenever a packet from sites with CF category “hate” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-health-pkts-hit	Description: The total number of packets from sites with CF category “health” accessed. Trigger: Increments whenever a packet from sites with CF category “health” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-health-pkts-block	Description: The total number of packets from sites with CF category “health” blocked. Trigger: Increments whenever a packet from sites with CF category “health” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-hobby-pkts-hit	Description: The total number of packets from sites with CF category “hobby” accessed. Trigger: Increments whenever a packet from sites with CF category “hobby” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-hobby-pkts-block	Description: The total number of packets from sites with CF category “hobby” blocked. Trigger: Increments whenever a packet from sites with CF category “hobby” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-hosts-pkts-hit	Description: The total number of packets from sites with CF category “host” accessed. Trigger: Increments whenever a packet from sites with CF category “host” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-hosts-pkts-block	Description: The total number of packets from sites with CF category “host” blocked. Trigger: Increments whenever a packet from sites with CF category “host” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-kids-pkts-hit	Description: The total number of packets from sites with CF category “kids” accessed. Trigger: Increments whenever a packet from sites with CF category “kids” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-kids-pkts-block	Description: The total number of packets from sites with CF category “kids” blocked. Trigger: Increments whenever a packet from sites with CF category “kids” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-legal-pkts-hit	Description: The total number of packets from sites with CF category “legal” accessed. Trigger: Increments whenever a packet from sites with CF category “legal” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-legal-pkts-block	Description: The total number of packets from sites with CF category “legal” blocked. Trigger: Increments whenever a packet from sites with CF category “legal” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-lifes-pkts-hit	Description: The total number of packets from sites with CF category “lifes” accessed. Trigger: Increments whenever a packet from sites with CF category “life” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-lifes-pkts-block	Description: The total number of packets from sites with CF category “lifes” blocked. Trigger: Increments whenever a packet from sites with CF category “life” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-mail-pkts-hit	Description: The total number of packets from sites with CF category “mail” accessed. Trigger: Increments whenever a packet from sites with CF category “mail” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-mail-pkts-block	Description: The total number of packets from sites with CF category “mail” blocked. Trigger: Increments whenever a packet from sites with CF category “mail” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-mil-pkts-hit	Description: The total number of packets from sites with CF category “military” accessed. Trigger: Increments whenever a packet from sites with CF category “military” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-mil-pkts-block	Description: The total number of packets from sites with CF category “military” blocked. Trigger: Increments whenever a packet from sites with CF category “military” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-news-pkts-hit	Description: The total number of packets from sites with CF category “news” accessed. Trigger: Increments whenever a packet from sites with CF category “news” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-news-pkts-block	Description: The total number of packets from sites with CF category “news” blocked. Trigger: Increments whenever a packet from sites with CF category “news” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-occult-pkts-hit	Description: The total number of packets from sites with CF category “occult” accessed. Trigger: Increments whenever a packet from sites with CF category “occult” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-occult-pkts-block	Description: The total number of packets from sites with CF category “occult” blocked. Trigger: Increments whenever a packet from sites with CF category “occult” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-peer-pkts-hit	Description: The total number of packets from sites with CF category “peer” accessed. Trigger: Increments whenever a packet from sites with CF category “peer” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-peer-pkts-block	Description: The total number of packets from sites with CF category “peer” blocked. Trigger: Increments whenever a packet from sites with CF category “peer” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-pers-pkts-hit	Description: The total number of packets from sites with CF category “pers” accessed. Trigger: Increments whenever a packet from sites with CF category “pers” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-pers-pkts-block	Description: The total number of packets from sites with CF category “pers” blocked. Trigger: Increments whenever a packet from sites with CF category “pers” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-photo-pkts-hit	Description: The total number of packets from sites with CF category “photo” accessed. Trigger: Increments whenever a packet from sites with CF category “photo” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-photo-pkts-block	Description: The total number of packets from sites with CF category “photo” blocked. Trigger: Increments whenever a packet from sites with CF category “photo” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-plag-pkts-hit	Description: The total number of packets from sites with CF category “plag” accessed. Trigger: Increments whenever a packet from sites with CF category “plag” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-plag-pkts-block	Description: The total number of packets from sites with CF category “plag” blocked. Trigger: Increments whenever a packet from sites with CF category “plag” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-poltic-pkts-hit	Description: The total number of packets from sites with CF category “poltic” accessed. Trigger: Increments whenever a packet from sites with CF category “poltic” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-poltic-pkts-block	Description: The total number of packets from sites with CF category “poltic” blocked. Trigger: Increments whenever a packet from sites with CF category “poltic” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-porn-pkts-hit	Description: The total number of packets from sites with CF category “porn” accessed. Trigger: Increments whenever a packet from sites with CF category “porn” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-porn-pkts-block	Description: The total number of packets from sites with CF category “porn” blocked. Trigger: Increments whenever a packet from sites with CF category “porn” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-portal-pkts-hit	Description: The total number of packets from sites with CF category “portal” accessed. Trigger: Increments whenever a packet from sites with CF category “portal” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-portal-pkts-block	Description: The total number of packets from sites with CF category “portal” blocked. Trigger: Increments whenever a packet from sites with CF category “portal” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-proxy-pkts-hit	Description: The total number of packets from sites with CF category “proxy” accessed. Trigger: Increments whenever a packet from sites with CF category “proxy” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-proxy-pkts-block	Description: The total number of packets from sites with CF category “proxy” blocked. Trigger: Increments whenever a packet from sites with CF category “proxy” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-ref-pkts-hit	Description: The total number of packets from sites with CF category “ref” accessed. Trigger: Increments whenever a packet from sites with CF category “ref” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-ref-pkts-block	Description: The total number of packets from sites with CF category “ref” blocked. Trigger: Increments whenever a packet from sites with CF category “ref” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-rel-pkts-hit	Description: The total number of packets from sites with CF category “rel” accessed. Trigger: Increments whenever a packet from sites with CF category “rel” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-rel-pkts-block	Description: The total number of packets from sites with CF category “rel” blocked. Trigger: Increments whenever a packet from sites with CF category “rel” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-sci-pkts-hit	Description: The total number of packets from sites with CF category “sci” accessed. Trigger: Increments whenever a packet from sites with CF category “sci” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-sci-pkts-block	Description: The total number of packets from sites with CF category “sci” blocked. Trigger: Increments whenever a packet from sites with CF category “sci” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-search-pkts-hit	Description: The total number of packets from sites with CF category “search” accessed. Trigger: Increments whenever a packet from sites with CF category “search” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-search-pkts-block	Description: The total number of packets from sites with CF category “search” blocked. Trigger: Increments whenever a packet from sites with CF category “search” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-shop-pkts-hit	Description: The total number of packets from sites with CF category “shop” accessed. Trigger: Increments whenever a packet from sites with CF category “shop” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-shop-pkts-block	Description: The total number of packets from sites with CF category “shop” blocked. Trigger: Increments whenever a packet from sites with CF category “shop” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-sport-pkts-hit	Description: The total number of packets from sites with CF category “sport” accessed. Trigger: Increments whenever a packet from sites with CF category “sport” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-sport-pkts-block	Description: The total number of packets from sites with CF category “sport” blocked. Trigger: Increments whenever a packet from sites with CF category “sport” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-stream-pkts-hit	Description: The total number of packets from sites with CF category “stream” accessed. Trigger: Increments whenever a packet from sites with CF category “stream” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-stream-pkts-block	Description: The total number of packets from sites with CF category “stream” blocked. Trigger: Increments whenever a packet from sites with CF category “stream” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-suic-pkts-hit	Description: The total number of packets from sites with CF category “suic” accessed. Trigger: Increments whenever a packet from sites with CF category “suic” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-suic-pkts-block	Description: The total number of packets from sites with CF category “suic” blocked. Trigger: Increments whenever a packet from sites with CF category “suic” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-sxed-pkts-hit	Description: The total number of packets from sites with CF category “sxed” accessed. Trigger: Increments whenever a packet from sites with CF category “sxed” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-sxed-pkts-block	Description: The total number of packets from sites with CF category “sxed” blocked. Trigger: Increments whenever a packet from sites with CF category “sxed” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-tech-pkts-hit	Description: The total number of packets from sites with CF category “tech” accessed. Trigger: Increments whenever a packet from sites with CF category “tech” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-tech-pkts-block	Description: The total number of packets from sites with CF category “tech” blocked. Trigger: Increments whenever a packet from sites with CF category “tech” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-trav-pkts-hit	Description: The total number of packets from sites with CF category “trav” accessed. Trigger: Increments whenever a packet from sites with CF category “trav” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-trav-pkts-block	Description: The total number of packets from sites with CF category “trav” blocked. Trigger: Increments whenever a packet from sites with CF category “trav” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-viol-pkts-hit	Description: The total number of packets from sites with CF category “viol” accessed. Trigger: Increments whenever a packet from sites with CF category “viol” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-viol-pkts-block	Description: The total number of packets from sites with CF category “viol” blocked. Trigger: Increments whenever a packet from sites with CF category “viol” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-voip-pkts-hit	Description: The total number of packets from sites with CF category “voip” accessed. Trigger: Increments whenever a packet from sites with CF category “voip” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-voip-pkts-block	Description: The total number of packets from sites with CF category “voip” blocked. Trigger: Increments whenever a packet from sites with CF category “voip” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-weap-pkts-hit	Description: The total number of packets from sites with CF category “weap” accessed. Trigger: Increments whenever a packet from sites with CF category “weap” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-weap-pkts-block	Description: The total number of packets from sites with CF category “weap” blocked. Trigger: Increments whenever a packet from sites with CF category “weap” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-white-pkts-hit	Description: The total number of packets from sites with CF category “white” accessed. Trigger: Increments whenever a packet from sites with CF category “white” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-white-pkts-block	Description: The total number of packets from sites with CF category “white” blocked. Trigger: Increments whenever a packet from sites with CF category “white” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-unknow-pkts-hit	Description: The total number of packets from sites with CF category “unknow” accessed. Trigger: Increments whenever a packet from sites with CF category “unknow” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32

Variables	Description	Data Type
cf-cat-unknow-pkts-block	Description: The total number of packets from sites with CF category “unknow” blocked. Trigger: Increments whenever a packet from sites with CF category “unknow” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-xcategory-pkts-hit	Description: The total number of packets from sites with CF category “xcategory” accessed. Trigger: Increments whenever a packet from sites with CF category “xcategory” is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-xcategory-pkts-block	Description: The total number of packets from sites with CF category “xcategory” blocked. Trigger: Increments whenever a packet from sites with CF category “xcategory” is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-all-pkts-hit	Description: The total number of URLs categorized by default action. Trigger: Increments whenever a packet categorized by default action is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-all-pkts-block	Description: The total number of URLs blocked by default action. Trigger: Increments whenever a packet categorized by default action is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-timer-pkts-hit	Description: The total number of URLs categorized by timeout action. Trigger: Increments whenever a packet categorized by timeout action is accessed. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-timer-pkts-block	Description: The total number of URLs blocked by timeout action. Trigger: Increments whenever a packet categorized by timeout action is blocked. Availability: Per Active Charging Service. Type: Counter	Int32
cf-cat-pkts-hit-summary	Description: Summary of total packets with CF category accessed. Trigger: Increments whenever a packet of any of the above categories is accessed. Availability: Per Active Charging Service. Type: Counter	String
cf-cat-pkts-block-summary	Description: Summary of total packets with CF category blocked. Trigger: Increments whenever a packet of any of the above categories is blocked. Availability: Per Active Charging Service. Type: Counter	String
ipsg-total-call-arrived	Description: The total number of IPSG calls arrived on this system. Trigger: Increments when a new IPSG call arrives. Availability: Per system. Type: Counter	Int32

Variables	Description	Data Type
ipsg-total-call-rejected	Description: The total number of IPSG calls rejected by this system. Trigger: Increments when an IPSG call is rejected. Availability: Per system. Type: Counter	Int32
ipsg-total-call-demult	Description: The total number of IPSG calls de-multiplexed by this system. Trigger: Increments when an IPSG is de-multiplexed. Availability: Per system. Type: Counter	Int32
ipsg-total-dereg-rep-sent	Description: The total number of IPSG calls de-registered by this system. Trigger: Increments when an IPSG call is de-registered. Availability: Per system. Type: Counter	Int32
ipsg-cur-active-call	Description: The number of IPSG calls currently active on this system. Trigger: Increments when an IPSG call comes up. Decrements when an IPSG call ends. Availability: Per system. Type: Gauge	Int32
ipsg-total-active-serv	Description: The total number of active IPSG services on this system. Trigger: Increments when an IPSG service is configured on the system. Decrements when an IPSG service is removed. Availability: Per system. Type: Gauge	Int32
dpca-cursess	Description: The total number of active DPCA sessions currently running on the node. Trigger: Increments when a DPCA session is created. Decrements when a DPCA session is terminated. Availability: Per IMS Authorization Service Type: Gauge	Int32
dcca-cursess	Description: The total number of active DCCA sessions currently running on the node. Trigger: Increments when an online Diameter session is created Decrements when an online session is terminated, or when an online session is converted to offline Availability: Per Credit Control Group Type: Gauge	Int32
asngw-cur-active-call	Description: The total number of active ASN-GW session on a system. Type: Gauge	Int32
asngw-total-sess-setup	Description: The total number of ASN-GW sessions setup on a system. Type: Counter	Int32
asngw-retriesexhaust	Description: The total number of retries for R6 connection setup for ASN-GW service on a system. Type: Counter	Int32

Variables	Description	Data Type
asngw-sfs	Description: The total number of ASN-GW service flows. Type: Counter	Int32
asngw-tidfail	Description: The total number of ASN-GW Transaction id (tid) failures on a system. Type: Counter	Int32
asngw-handoffattempt	Description: The total number of intra-ASN Gateway and inter-ASN Gateway hand-offs attempted on a system. Type: Counter	Int32
asngw-handoffdenied	Description: The total number of intra-ASN Gateway and inter-ASN Gateway hand-offs denied/failed on a system. Type: Counter	Int32
asngw-handoffcomp	Description: The total number of successful intra-ASN Gateway and inter-ASN Gateway hand-offs completed on a system. Type: Counter	Int32
asngw-authsucc	Description: The total number of successful EAP authorization on a system for ASN-GW service. Type: Counter	Int32
asngw-authfailures	Description: The total number of failed EAP authorization on a system for ASN-GW service. Type: Counter	Int32
asngw-simple-ip-reanchored	Description: The total number of sessions that have completed a simple IP re-anchoring on ASNGW. Type: Counter	Int32
asnpc-cursess	Description: The total number of ASN-PC sessions currently running on a system. This is a Cisco Proprietary statistic. Trigger: A new session was created on an ASNPC service. Availability: This value is cumulative for all ASNPC services configured on the system. Type: Counter	Int64
asnpc-curactive	Description: The total number of active ASN-PC sessions on a system. Type: Gauge	Int64
asnpc-ttlsetup	Description: The total number of historic ASN-PC sessions that have been set up on a system. This is a Cisco proprietary statistic. Trigger: A new session was created on the system for an ASNPC service. Availability: The historic cumulative total for all ASNPC services configured on the system. Type: Counter	Int64
asnpc-retriesexhaust	Description: The total number of retries exhaust happened for R6 connection setup for an ASN-PC service on a system. This is a Cisco proprietary statistic. Trigger: The max retransmission limit for R6 for ASNPC call setup has been exceeded. Availability: This is a cumulative total for all ASNPC services configured on the system. Type: Counter	Int32

Variables	Description	Data Type
asnpc-tidfail	Description: The total number of ASN-PC Transaction id (TID) failures on a system. This is a Cisco proprietary statistic. Trigger: A TID error due to call setup occurred on an ASNPC service. Availability: This total is cumulative for all ASNPC services configured on the system. Type: Counter	Int32
asnpc-luattempted	Description: The total number of location update Req messages received on ASN-PC. This is a Cisco proprietary statistic. Trigger: A Location Update was attempted by the MS in Idle mode. Availability: This total is cumulative for all ASNPC services configured on the system. Type: Counter	Int32
asnpc-ludenied	Description: The total number of Location Update Requests denied/failed on a system. This is a Cisco proprietary statistic. Trigger: A Location Update was denied by the MS in Idle mode. Availability: This total is cumulative for all ASNPC services configured on the system. Type: Counter	Int32
asnpc-lucomp	Description: The total number of successfully completed Location Updates on ASN-PC. This is a Cisco proprietary statistic. Trigger: Successful completion of a Location Update in Idle Mode. Availability: This total is cumulative for all ASNPC services configured on the system. Type: Counter	Int32
asnpc-pagattempted	Description: The total number of paging procedures started on ASN-PC. This is a Cisco proprietary statistic. Trigger: Paging was attempted by an ASNPC service for making the MS active, etc. Availability: This total is cumulative for all ASNPC services configured on the system. Type: Counter	Int32
asnpc-pagsucceeded	Description: The total number of paging procedures successfully completed on ASN-PC. This is a Cisco proprietary statistic. Trigger: The system successfully received an IM Exit or Location Update from MS, after an ASNPC service sent a Paging Announce. Availability: This total is cumulative for all ASNPC services configured on the system. Type: Counter	Int32
asnpc-annoucetriggered	Description: The total number of paging announce messages scheduled to be sent by ASN-PC. This is a Cisco proprietary statistic. Trigger: The ASNGW requested an ASNPC service to trigger paging. Availability: This total is cumulative for all ASNPC services configured on the system. Type: Counter	Int32
phsgw-cursess	Not supported in this release. Type: Gauge	Int32
phsgw-cur-active-call	Not supported in this release. Type: Gauge	Int32
phsgw-total-sess-setup	Not supported in this release.	Int32
phsgw-retriesexhaust	Not supported in this release.	Int32
phsgw-uplink-sfs	Not supported in this release.	Int32

Variables	Description	Data Type
phsgw-downlink-sfs	Not supported in this release.	Int32
phsgw-tidfail	Not supported in this release.	Int32
phsgw-handoffattempt	Not supported in this release.	Int32
phsgw-handoffdenied	Not supported in this release.	Int32
phsgw-handoffcomp	Not supported in this release.	Int32
phsgw-authsucc	Not supported in this release.	Int32
phsgw-authfailures	Not supported in this release.	Int32
phsgw-3partyauthsucc	Not supported in this release.	Int32
phsgw-3partyauthfailures	Not supported in this release.	Int32
phspc-cursess	Not supported in this release. Type: Gauge	Int32
phspc-total-sess-setup	Not supported in this release.	Int32
phspc-retriesexhaust	Not supported in this release.	Int32
phspc-tidfail	Not supported in this release.	Int32
phspc-locupdate-attempt	Not supported in this release.	Int32
phspc-locupdate-denied	Not supported in this release.	Int32
phspc-locupdate-comp	Not supported in this release.	Int32
phspc-paging-attempt	Not supported in this release.	Int32
ikev2-cursa	Description: The total number of current security associations with Internet Key Exchange v2 (IKEv2). Type: Gauge	Int32
ikev2-cursainit	Description: The total number of current security associations for which the peers initiated the IKE_SA_INIT exchanges. Type: Gauge	Int32
ikev2-cursaresp	Description: The total number of response for active security associations with Internet Key Exchange v2 (IKEv2) Type: Gauge	Int32
ikev2-ttlsa	Description: The total number of security associations with Internet Key Exchange v2 (IKEv2) Type: Counter	Int32
ikev2-ttlsainit	Description: The total number of security associations for which the gateway initiated the IKE_SA_INIT exchanges. Type: Counter	Int32
ikev2-ttlsaresp	Description: The total number of security associations for which the peers initiated the IKE_SA_INIT exchanges. Type: Counter	Int32

Variables	Description	Data Type
ikev2-attempt	Description: The total number of attempts for security association tunnel with Internet Key Exchange v2 (IKEv2) Type: Counter	Int32
ikev2-attemptinit	Description: The total number of attempts for which the gateway initiated the IKE_SA_INIT exchanges. Type: Counter	Int32
ikev2-attemptresp	Description: The total number of attempts for which the peers initiated the IKE_SA_INIT exchanges. Type: Counter	Int32
ikev2-rxpacket	Description: The total number of packets received with Internet Key Exchange v2 (IKEv2) Type: Counter	Int32
ikev2-txpacket	Description: The total number of packets transmitted with Internet Key Exchange v2 (IKEv2) Type: Counter	Int32
ikev2-rxoctet	Description: The total number of octets received with Internet Key Exchange v2 (IKEv2) Type: Counter	Int32
ikev2-txoctet	Description: The total number of octets transmitted with Internet Key Exchange v2 (IKEv2) Type: Counter	Int32
ikev2-initfail	Description: The total number of failed negotiations for which the gateway initiated the IKE_SA_INIT exchanges. Type: Counter	Int32
ikev2-initfail-noresp	Description: The total number of negotiations initiated by the gateway that failed because of no responses from peers. Type: Counter	Int32
ikev2-initfail-resp	Description: The total number of negotiations initiated by the peers and responded to by the gateway that failed because of errors. Type: Counter	Int32
ikev2-invcookie	Description: The total number of invalid cookie errors. Type: Counter	Int32
ikev2-congrej	Description: The total number of negotiations that were rejected because of congestion control. Type: Counter	Int32
ikev2-congdrop	Description: The total number of negotiations that were dropped because of congestion control. Type: Counter	Int32
ikev2-unkxchgspi	Description: The total number of unknown exchange security parameter indexes. Type: Counter	Int32
ikev2-nattkeepalive-recv	Description: The total number of NAT-T Keep-Alive messages received with IKEv2 Type: Counter	Int32

Variables	Description	Data Type
ikev2-nattkeepalive-send	Description: The total number of NAT-Keep-Alive messages sent with IKEv2 Type: Counter	Int32
ikev2-dpd-recv	Description: The total number of DPD (Dead-Peer-Detection) request messages received. Type: Counter	Int32
ikev2-dpd-send	Description: The total number of DPD request messages sent. Type: Counter	Int32
ikev2-dpd-recv-reply	Description: The total number of DPD reply messages received. Type: Counter	Int32
ikev2-dpd-send-reply	Description: The total number of DPD reply messages sent. Type: Counter	Int32
ikev2-dpd-timeout	Description: The total number of failures to receive DPD reply messages before timeout. Type: Counter	Int32
ipsec-dpd-plrekey	Description: The total number of successful IKE SA rekeys. Type: Counter	Int32
ikev2-ikesadel	Description: The total number of deletes sent or received. Type: Counter	Int32
ikev2-ikesadelreq-sent	Description: The total number of delete requests sent. Type: Counter	Int32
ikev2-ikesadelreq-recv	Description: The total number of delete requests received. Type: Counter	Int32
ikev2-ikesadelrep-sent	Description: The total number of delete replies sent. Type: Counter	Int32
ikev2-ikesadelrep-recv	Description: The total number of delete replies received. Type: Counter	Int32
ikev2-curikev2sa	Description: The total number of current IKEv2 Security Associations. Type: Gauge	Int32
ikev2-curhalfsa	Description: The total number of negotiations in which the subject has received IKE_SA_INIT requests but has not finished IKE_AUTH exchanges. Type: Gauge	Int32
ikev2-curconnsa	Description: The total number of negotiations in which the subject has sent or received IKE_SA_INIT requests but has not finished IKE_AUTH exchanges. Type: Gauge	Int32
ikev2-curestsa	Description: The total number of currently established IKEv2 Security Associations. Type: Gauge	Int32
ikev2-curchildsa	Description: The total number of current Child Security Associations. Type: Gauge	Int32

Variables	Description	Data Type
ikev2-exp-retran	Description: The total number of IKESA retransmission expirations. Type: Counter	Int32
ikev2-exp-setupnoxchg	Description: The total number of IKESA setup expirations (no exchange). Type: Counter	Int32
ikev2-exp-setup	Description: The total number of IKESA setup expirations. Type: Counter	Int32
ikev2-exp-lifesoft	Description: The total number of IKESA lifetime (soft) expirations. Type: Counter	Int32
ikev2-exp-lifehard	Description: The total number of IKESA lifetime (hard) expirations. Type: Counter	Int32
ikev2-exp-childsetupnoxchg	Description: The total number of Child Security Association setup expirations (no exchange). Type: Counter	Int32
ikev2-exp-childlifesoft	Description: The total number of Child Security Association lifetime (soft) expirations. Type: Counter	Int32
ikev2-exp-childlifehard	Description: The total number of Child Security Association lifetime (hard) expirations. Type: Counter	Int32
ikev2-csa-createreqsnt	Description: The total number of IKEv2 Create CHILD_SA Exchange Requests sent. Type: Counter	Int32
ikev2-csa-createreqrcv	Description: The total number of IKEv2 Create CHILD_SA Exchange Requests received. Type: Counter	Int32
ikev2-csa-createrspnt	Description: The total number of IKEv2 Create CHILD_SA Exchange Responses sent. Type: Counter	Int32
ikev2-csa-createrspvcv	Description: The total number of IKEv2 Create CHILD_SA Exchange Responses received. Type: Counter	Int32
ikev2-csa-createsucc	Description: The total number of IKEv2 Create CHILD_SA Exchange successes. Type: Counter	Int32
ikev2-csa-createfail	Description: The total number of IKEv2 Create CHILD_SA Exchange failures. Type: Counter	Int32
ikev2-csa-createsftovrflw	Description: The total number of IKEv2 Create CHILD_SA Exchange soft limit overflow attempts. Type: Counter	Int32
ikev2-csa-createhrdovrflw	Description: The total number of IKEv2 Create CHILD_SA Exchange hard limit overflow attempts. Type: Counter	Int32
ikev2-csa-sngldelpldsnt	Description: The total number of IKEv2 INFORMATIONAL Exchanges with a single CHILD_SA Delete payload sent. Type: Counter	Int32

Variables	Description	Data Type
ikev2-csa-sngldelpldrcv	Description: The total number of IKEv2 INFORMATIONAL Exchanges with a single CHILD_SA Delete payload received. Type: Counter	Int32
ikev2-csa-multdelpldsnt	Description: The total number of IKEv2 INFORMATIONAL Exchanges with multiple CHILD_SA Delete payloads sent. Type: Counter	Int32
ikev2-csa-multdelpldrcv	Description: The total number of IKEv2 INFORMATIONAL Exchanges with multiple CHILD_SA Delete payloads received. Type: Counter	Int32
ikev2-csa-delpldsnglspisnt	Description: The total number of IKEv2 INFORMATIONAL Exchanges with a CHILD_SA Delete payload with a single SPI sent. Type: Counter	Int32
ikev2-csa-delpldsnglspircv	Description: The total number of IKEv2 INFORMATIONAL Exchanges with a CHILD_SA Delete payload with a single SPI received. Type: Counter	Int32
ikev2-csa-delmultspisnt	Description: The total number of IKEv2 INFORMATIONAL Exchanges with a CHILD_SA Delete payload with multiple SPIs sent. Type: Counter	Int32
ikev2-csa-delmultspircv	Description: The total number of IKEv2 INFORMATIONAL Exchanges with a CHILD_SA Delete payload with multiple SPIs received. Type: Counter	Int32
ikev2-auth-p1succ	Description: The total number of IKEv2 Phase 1 authentication successes. Type: Counter	Int32
ikev2-auth-p1fail	Description: The total number of IKEv2 Phase 1 authentication failures. Type: Counter	Int32
ikev2-auth-p1req	Description: The total number of IKEv2 Phase 1 authentication requests sent. Type: Counter	Int32
ikev2-auth-p1rsp	Description: The total number of IKEv2 Phase 1 authentication responses received. Type: Counter	Int32
ikev2-auth-p1finalsent	Description: The total number of IKEv2 Phase 1 authentication requests or responses sent in the final exchange of Phase 1 authentication. Type: Counter	Int32
ikev2-auth-p1finalrcvd	Description: The total number of IKEv2 Phase 1 authentication requests or responses received in the final exchange of Phase 1 authentication. Type: Counter	Int32
ikev2-auth-p2succ	Description: The total number of IKEv2 Phase 2 authentication successes. Type: Counter	Int32
ikev2-auth-p2fail	Description: The total number of IKEv2 Phase 2 authentication failures. Type: Counter	Int32
ikev2-auth-p2req	Description: The total number of IKEv2 Phase 2 authentication requests sent. Type: Counter	Int32

Variables	Description	Data Type
ikev2-auth-p2rsp	Description: The total number of IKEv2 Phase 2 authentication responses received. Type: Counter	Int32
ikev2-auth-p2succmd5	Description: The total number of IKEv2 Phase 2 authentication MD5 successes. Type: Counter	Int32
ikev2-auth-p2failmd5	Description: The total number of IKEv2 Phase 2 authentication MD5 failures. Type: Counter	Int32
ikev2-auth-p2succgtc	Description: The total number of IKEv2 Phase 2 authentication Generic Token Card successes. Type: Counter	Int32
ikev2-auth-p2failgtc	Description: The total number of IKEv2 Phase 2 authentication Generic Token Card failures. Type: Counter	Int32
ikev2-auth-p2finalsent	Description: The total number of IKEv2 Phase 2 authentication requests or responses sent in the final exchange of Phase 2 authentication. Type: Counter	Int32
ikev2-auth-p2finalrcvd	Description: The total number of IKEv2 Phase 2 authentication requests or responses received in the final exchange of Phase 2 authentication. Type: Counter	Int32
ikev2-auth-failhash	Description: The total number of IKEv2 authentication hash match failures. Type: Counter	Int32
ikev2-auth-failsign	Description: The total number of IKEv2 authentication signing failures. Type: Counter	Int32
ikev2-auth-failmskmiss	Description: The total number of IKEv2 Master Session Keys missing at Phase 1 completion. Type: Counter	Int32
ikev2-auth-failmissanother	Description: The total number of IKEv2 authentication that failed because of missing NOTIFY (ANOTHER_AUTH_FOLLOWS) payload. Type: Counter	Int32
ikev2-xchg-droprspnoikesa	Description: The total number of IKEv2 exchanges dropped (response packets dropped). No IKE SA. Type: Counter	Int32
ikev2-xchg-dropinvrsp	Description: The total number of IKEv2 exchanges dropped (invalid responses). Type: Counter	Int32
ikev2-xchg-dropnoninitnoikesa	Description: The total number of IKEv2 exchanges dropped (non-init exchanges dropped). No IKE SA. Type: Counter	Int32
ikev2-xchg-dropinvmmsgid	Description: The total number of IKEv2 exchanges dropped (invalid message ID). Type: Counter	Int32
ikev2-xchg-dropinvmajver	Description: The total number of IKEv2 exchanges dropped (invalid major version). Type: Counter	Int32

Variables	Description	Data Type
ikev2-xchg-dropikesaerr	Description: The total number of IKEv2 exchanges dropped (IKE SA error). Type: Counter	Int32
ikev2-xchg-dropunkcrit	Description: The total number of IKEv2 exchanges dropped (unknown critical payload). Type: Counter	Int32
ikev2-xchg-dropretransdisc	Description: The total number of IKEv2 exchanges dropped (retransmitted request). Type: Counter	Int32
ikev2-notif-cooksent	Description: The total number of IKEv2 Cookie Notify payloads sent. Type: Counter	Int32
ikev2-notif-cookrecv	Description: The total number of IKEv2 Cookie Notify payloads received. Type: Counter	Int32
ikev2-notif-cookmatch	Description: The total number of IKEv2 Cookie Notify payloads matched. Type: Counter	Int32
ikev2-notif-cooknotmatch	Description: The total number of IKEv2 Cookie Notify payloads not matched. Type: Counter	Int32
ikev2-notif-multauthsupp	Description: The total number of IKEv2 multiple authentications supported. Type: Counter	Int32
ikev2-notif-anothauth	Description: The total number of NOTIFY (ANOTHER_AUTH_FOLLOWS) payloads received. Type: Counter	Int32
ikev2-rekey-ikesareqsent	Description: Total IKEv2 IKE SA rekey requests sent. Type: Counter	Int32
ikev2-rekey-ikesareqrcvd	Description: Total IKEv2 IKE SA rekey requests received. Type: Counter	Int32
ikev2-rekey-ikesarspsent	Description: Total IKEv2 IKE SA rekey responses sent. Type: Counter	Int32
ikev2-rekey-ikesarsprcvd	Description: Total IKEv2 IKE SA rekey responses received. Type: Counter	Int32
ikev2-rekey-ikesaignored	Description: Total IKEv2 IKE SA rekeys ignored. Type: Counter	Int32
ikev2-rekey-childsareqsent	Description: Total IKEv2 Child SA rekey requests sent. Type: Counter	Int32
ikev2-rekey-childsareqrcv	Description: Total IKEv2 Child SA rekey requests received. Type: Counter	Int32
ikev2-rekey-childsarspsent	Description: Total IKEv2 Child SA rekey responses sent. Type: Counter	Int32
ikev2-rekey-childsarsprcv	Description: Total IKEv2 Child SA rekey responses received. Type: Counter	Int32
ikev2-rekey-childsaignored	Description: Total IKEv2 Child SA rekeys ignored. Type: Counter	Int32

Variables	Description	Data Type
ikev2-mobike-sent	Description: Total IKEv2 MOBIKE_SUPPORTED Notify payloads sent. Type: Counter	Int32
ikev2-mobike-recv	Description: Total IKEv2 MOBIKE_SUPPORTED Notify payloads received. Type: Counter	Int32
ikev2-mobike-ignored	Description: Total IKEv2 MOBIKE_SUPPORTED Notify payloads ignored. Type: Counter	Int32
ikev2-misc-ikesacrefail	Description: Total IKEv2 SA create failures. Type: Counter	Int32
ikev2-misc-saflowopfail	Description: Total IKEv2 child SA flow operation failures. Type: Counter	Int32
ikev2-notifpaysent-invke	Description: Total IKEv2 Notify payloads sent (invalid KE payload). Type: Counter	Int32
ikev2-notifpaysent-invmajver	Description: Total IKEv2 Notify payloads sent (invalid major version). Type: Counter	Int32
ikev2-notifpaysent-invmmsgid	Description: Total IKEv2 Notify payloads sent (invalid message ID). Type: Counter	Int32
ikev2-notifpaysent-invsyn	Description: Total IKEv2 Notify payloads sent (invalid syntax). Type: Counter	Int32
ikev2-notifpaysent-noaddsa	Description: Total IKEv2 Notify payloads sent (no additional SAs). Type: Counter	Int32
ikev2-notifpaysent-noprop	Description: Total IKEv2 Notify payloads sent (no proposal chosen). Type: Counter	Int32
ikev2-notifpaysent-tsunaccept	Description: Total IKEv2 Notify payloads sent (TS unacceptable). Type: Counter	Int32
ikev2-notifpaysent-unsupperit	Description: Total IKEv2 Notify payloads sent (unsupported critical payload). Type: Counter	Int32
ikev2-notifpayrecv-intfail	Description: Total IKEv2 Notify payloads received (internal failure sent). Type: Counter	Int32
ikev2-notifpayrecv-invke	Description: Total IKEv2 Notify payloads received (invalid KE payload). Type: Counter	Int32
ikev2-notifpayrecv-invmajver	Description: Total IKEv2 Notify payloads received (invalid major version). Type: Counter	Int32
ikev2-notifpayrecv-invmmsgid	Description: Total IKEv2 Notify payloads received (invalid message ID). Type: Counter	Int32
ikev2-notifpayrecv-invsyn	Description: Total IKEv2 Notify payloads received (invalid syntax). Type: Counter	Int32
ikev2-notifpayrecv-noaddsa	Description: Total IKEv2 Notify payloads received (no additional SAs). Type: Counter	Int32

Variables	Description	Data Type
ikev2-notifpayrecv-noprop	Description: Total IKEv2 Notify payloads received (no proposal chosen). Type: Counter	Int32
ikev2-notifpayrecv-tsunaccept	Description: Total IKEv2 Notify payloads received (TS unacceptable). Type: Counter	Int32
ikev2-notifpayrecv-unsuppcrit	Description: Total IKEv2 Notify payloads received (unsupported critical payload). Type: Counter	Int32
ikev2-decfail-pktfail	Description: Total IKEv2 exchange decode failures (packet errors). Type: Counter	Int32
ikev2-decfail-interr	Description: Total IKEv2 exchange decode failures (internal errors). Type: Counter	Int32
ikev2-decfail-iphdr	Description: Total IKEv2 exchange decode failures (invalid IP header). Type: Counter	Int32
ikev2-decfail-udphdr	Description: Total IKEv2 exchange decode failures (invalid UDP header). Type: Counter	Int32
ikev2-decfail-ikehdr	Description: Total IKEv2 exchange decode failures (invalid IKE header). Type: Counter	Int32
ikev2-decfail-ikehdrpay	Description: Total IKEv2 exchange decode failures (invalid IKE header payload). Type: Counter	Int32
ikev2-decfail-ikehdrnitspi	Description: Total IKEv2 exchange decode failures (invalid IKE header init Security Parameter Index). Type: Counter	Int32
ikev2-decfail-ikehdrrspspi	Description: Total IKEv2 exchange decode failures (invalid IKE header response Security Parameter Index). Type: Counter	Int32
ikev2-decfail-ikehdrmajver	Description: Total IKEv2 exchange decode failures (invalid IKE header major version). Type: Counter	Int32
ikev2-decfail-ikehdrminorver	Description: Total IKEv2 exchange decode failures (invalid IKE header minor version). Type: Counter	Int32
ikev2-decfail-ikehdrxchgtyp	Description: Total IKEv2 exchange decode failures (invalid IKE header exchange type). Type: Counter	Int32
ikev2-decfail-ikehdrrecvflag	Description: Total IKEv2 exchange decode failures (invalid IKE header received flag). Type: Counter	Int32
ikev2-decfail-ikehdrlen	Description: Total IKEv2 exchange decode failures (invalid IKE header length). Type: Counter	Int32
ikev2-decfail-syn	Description: Total IKEv2 exchange decode failures (invalid syntax). Type: Counter	Int32
ikev2-decfail-paysyn	Description: Total IKEv2 exchange decode failures (invalid payload syntax). Type: Counter	Int32

Variables	Description	Data Type
ikev2-decfail-paylen	Description: Total IKEv2 exchange decode failures (invalid payload length). Type: Counter	Int32
ikev2-decfail-unkcritpay	Description: Total IKEv2 exchange decode failures (unknown critical payload). Type: Counter	Int32
ikev2-decfail-toomanypay	Description: Total IKEv2 exchange decode failures (too many payloads). Type: Counter	Int32
ikev2-decfail-sapaylen	Description: Total IKEv2 exchange decode failures (invalid SA payload length). Type: Counter	Int32
ikev2-decfail-saprophdr	Description: Total IKEv2 exchange decode failures (invalid SA proposal header). Type: Counter	Int32
ikev2-decfail-saprophdrecv	Description: Total IKEv2 exchange decode failures (invalid SA proposal header received). Type: Counter	Int32
ikev2-decfail-toomanytrans	Description: Total IKEv2 exchange decode failures (too many transforms). Type: Counter	Int32
ikev2-decfail-saprophdrln	Description: Total IKEv2 exchange decode failures (invalid SA proposal header length). Type: Counter	Int32
ikev2-decfail-toomanyprop	Description: Total IKEv2 exchange decode failures (too many proposals). Type: Counter	Int32
ikev2-decfail-1stsapropnum	Description: Total IKEv2 exchange decode failures (invalid first SA proposal). Type: Counter	Int32
ikev2-decfail-saprotid	Description: Total IKEv2 exchange decode failures (invalid protocol ID in SA proposal). Type: Counter	Int32
ikev2-decfail-sapropnum	Description: Total IKEv2 exchange decode failures (invalid SA proposal number). Type: Counter	Int32
ikev2-decfail-translen	Description: Total IKEv2 exchange decode failures (invalid transform length). Type: Counter	Int32
ikev2-decfail-transhdr	Description: Total IKEv2 exchange decode failures (invalid transform header). Type: Counter	Int32
ikev2-decfail-transhdrecv	Description: Total IKEv2 exchange decode failures (invalid transform header received). Type: Counter	Int32
ikev2-decfail-transtype	Description: Total IKEv2 exchange decode failures (invalid transform type). Type: Counter	Int32
ikev2-decfail-transid	Description: Total IKEv2 exchange decode failures (invalid transform ID). Type: Counter	Int32
ikev2-decfail-kepaylen	Description: Total IKEv2 exchange decode failures (invalid KE payload length). Type: Counter	Int32
ikev2-decfail-kedhgrp	Description: Total IKEv2 exchange decode failures (invalid KE DH group). Type: Counter	Int32

Variables	Description	Data Type
ikev2-decfail-kedhgrplen	Description: Total IKEv2 exchange decode failures (invalid KE DH group length). Type: Counter	Int32
ikev2-decfail-idpaylen	Description: Total IKEv2 exchange decode failures (invalid ID payload length). Type: Counter	Int32
ikev2-decfail-idpaytype	Description: Total IKEv2 exchange decode failures (invalid ID payload type). Type: Counter	Int32
ikev2-decfail-authpaylen	Description: Total IKEv2 exchange decode failures (invalid authentication payload length). Type: Counter	Int32
ikev2-decfail-noncepaylen	Description: Total IKEv2 exchange decode failures (invalid nonce payload length). Type: Counter	Int32
ikev2-decfail-notifpaylen	Description: Total IKEv2 exchange decode failures (invalid Notify payload length). Type: Counter	Int32
ikev2-decfail-notifpayspilen	Description: Total IKEv2 exchange decode failures (invalid Notify payload Security Parameter Index length). Type: Counter	Int32
ikev2-decfail-notifpaynat	Description: Total IKEv2 exchange decode failures (invalid Notify payload NAT). Type: Counter	Int32
ikev2-decfail-notifpayprotid	Description: Total IKEv2 exchange decode failures (invalid Notify payload protocol ID). Type: Counter	Int32
ikev2-decfail-eappaylen	Description: Total IKEv2 exchange decode failures (invalid EAP payload length). Type: Counter	Int32
ikev2-decfail-notifpayrekey	Description: Total IKEv2 exchange decode failures (invalid Notify payload rekey). Type: Counter	Int32
ikev2-decfail-cppaylen	Description: Total IKEv2 exchange decode failures (invalid CP payload length). Type: Counter	Int32
ikev2-decfail-notifpaycook	Description: Total IKEv2 exchange decode failures (invalid Notify payload cookie). Type: Counter	Int32
ikev2-decfail-tspaylen	Description: Total IKEv2 exchange decode failures (invalid TS payload length). Type: Counter	Int32
ikev2-decfail-cppayattrlen	Description: Total IKEv2 exchange decode failures (invalid CP payload attribute length). Type: Counter	Int32
ikev2-decfail-tspayrecv	Description: Total IKEv2 exchange decode failures (invalid TS payload received). Type: Counter	Int32
ikev2-decfail-encrpaylen	Description: Total IKEv2 exchange decode failures (invalid encrypted payload length). Type: Counter	Int32
ikev2-decfail-tspaytstype	Description: Total IKEv2 exchange decode failures (invalid TS payload TS type). Type: Counter	Int32

■ Common Syntax Options

Variables	Description	Data Type
ikev2-decfail-unsuppcritpay	Description: Total IKEv2 exchange decode failures (unsupported critical payload). Type: Counter	Int32
ikev2-decfail-unsuppcertpay	Description: Total IKEv2 exchange decode failures (unsupported certificate payload). Type: Counter	Int32
ikev2-decfail-unsuppnofprotah	Description: Total IKEv2 exchange decode failures (unsupported Notify protocol authentication header). Type: Counter	Int32
ikev2-decfail-unsuppauthmeth	Description: Total IKEv2 exchange decode failures (unsupported authentication method). Type: Counter	Int32
ikev2-decfail-unsupppaycritvid	Description: Total IKEv2 exchange decode failures (unsupported payload critical VID). Type: Counter	Int32
ikev2-decfail-unsuppmeth	Description: Total IKEv2 exchange decode failures (unsupported method). Type: Counter	Int32
ikev2-decfail-unkerr	Description: Total IKEv2 exchange decode failures (unknown error). Type: Counter	Int32
ikev2-decfail-unsuppsapayprotah	Description: Total IKEv2 exchange decode failures (unsupported SA payload protocol authentication header). Type: Counter	Int32
ikev2-decfail-unsuptspaytsnum	Description: Total IKEv2 exchange decode failures (unsupported TS payload TS number). Type: Counter	Int32
ikev2-decfail-unsuptspaytstype	Description: Total IKEv2 exchange decode failures (unsupported TS payload TS type). Type: Counter	Int32
ikev2-decfail-unsuptspaytsprot	Description: Total IKEv2 exchange decode failures (unsupported TS payload TS protocol). Type: Counter	Int32
ikev2-decfail-cppaynoipaddr	Description: Total IKEv2 exchange decode failures (invalid CP payload—no IP address). Type: Counter	Int32
ikev2-decfail-cppayunkattr	Description: Total IKEv2 exchange decode failures (invalid CP payload—unknown attribute). Type: Counter	Int32
ikev2-decryptfail	Description: Total IKEv2 decryption failures (packets failure). Type: Counter	Int32
ikev2-decryptfail-hmac	Description: Total IKEv2 decryption failures (HMAC mismatch). Type: Counter	Int32
ikev2-decryptfail-pad	Description: Total IKEv2 decryption failures (PAD length error). Type: Counter	Int32
ikev2-xchg-badmsgid	Description: Total IKEv2 exchange statistics (bad message ID). Type: Counter	Int32
ikev2-xchg-badresp	Description: Total IKEv2 exchange statistics (bad response). Type: Counter	Int32

Variables	Description	Data Type
ikev2-xchg-stalemsgid	Description: Total IKEv2 exchange statistics (stale message ID). Type: Counter	Int32
ikev2-xchg-unkerr	Description: Total IKEv2 exchange statistics (unknown error). Type: Counter	Int32
ikev2-xchg-statelookfail	Description: Total IKEv2 exchange statistics (state lookup failure). Type: Counter	Int32
ikev2-notifrecv-unsuppcripay	Description: Total IKEv2 Notify message receive statistics (unsupported critical payload). Type: Counter	Int32
ikev2-notifrecv-invikespi	Description: Total IKEv2 Notify message receive statistics (invalid IKE Security Parameter Index). Type: Counter	Int32
ikev2-notifrecv-invmajver	Description: Total IKEv2 Notify message receive statistics (invalid major version). Type: Counter	Int32
ikev2-notifrecv-invsyn	Description: Total IKEv2 Notify message receive statistics (invalid syntax). Type: Counter	Int32
ikev2-notifrecv-invmsgid	Description: Total IKEv2 Notify message receive statistics (invalid message ID). Type: Counter	Int32
ikev2-notifrecv-invspi	Description: Total IKEv2 Notify message receive statistics (invalid Security Parameter Index). Type: Counter	Int32
ikev2-notifrecv-nopropchosen	Description: Total IKEv2 Notify message receive statistics (no proposal chosen). Type: Counter	Int32
ikev2-notifrecv-invkepay	Description: Total IKEv2 Notify message receive statistics (invalid KE payload). Type: Counter	Int32
ikev2-notifrecv-authfail	Description: Total IKEv2 Notify message receive statistics (authentication failure). Type: Counter	Int32
ikev2-notifrecv-singpairreq	Description: Total IKEv2 Notify message receive statistics (single pair required). Type: Counter	Int32
ikev2-notifrecv-noaddsa	Description: Total IKEv2 Notify message receive statistics (no additional SAs). Type: Counter	Int32
ikev2-notifrecv-intaddrfail	Description: Total IKEv2 Notify message receive statistics (internal address failure). Type: Counter	Int32
ikev2-notifrecv-failcpreq	Description: Total IKEv2 Notify message receive statistics (failed CP required). Type: Counter	Int32
ikev2-notifrecv-tsunaccept	Description: Total IKEv2 Notify message receive statistics (TS unacceptable). Type: Counter	Int32
ikev2-notifrecv-invsel	Description: Total IKEv2 Notify message receive statistics (invalid selectors). Type: Counter	Int32

Variables	Description	Data Type
ikev2-notifrecv-unacceptaddr	Description: Total IKEv2 Notify message receive statistics (unacceptable addresses). Type: Counter	Int32
ikev2-notifrecv-multiauthsupp	Description: Total IKEv2 Notify message receive statistics (multiple authentication supported). Type: Counter	Int32
ikev2-notifrecv-anothauthfoll	Description: Total IKEv2 Notify message receive statistics (another authentication follows). Type: Counter	Int32
ikev2-notifrecv-unexpectnat	Description: Total IKEv2 Notify message receive statistics (unexpected NAT detected). Type: Counter	Int32
ikev2-notifrecv-macauthfail	Description: Total IKEv2 Notify message receive statistics (MAC address authentication failed). Type: Counter	Int32
ikev2-notifrecv-hsserrusrunk	Description: Total IKEv2 Notify message receive statistics (HSS error—user unknown). Type: Counter	Int32
ikev2-notifrecv-initcont	Description: Total IKEv2 Notify message receive statistics (initial contact). Type: Counter	Int32
ikev2-notifrecv-windsiz	Description: Total IKEv2 Notify message receive statistics (set window size). Type: Counter	Int32
ikev2-notifrecv-addtsposs	Description: Total IKEv2 Notify message receive statistics (additional TS possible). Type: Counter	Int32
ikev2-notifrecv-ipcompsupp	Description: Total IKEv2 Notify message receive statistics (IPCOMP supported). Type: Counter	Int32
ikev2-notifrecv-natdetsrcip	Description: Total IKEv2 Notify message receive statistics (NAT detection—source IP). Type: Counter	Int32
ikev2-notifrecv-natdetdstip	Description: Total IKEv2 Notify message receive statistics (NAT detection—destination IP). Type: Counter	Int32
ikev2-notifrecv-cookie	Description: Total IKEv2 Notify message receive statistics (cookie). Type: Counter	Int32
ikev2-notifrecv-usetransmode	Description: Total IKEv2 Notify message receive statistics (use transport mode). Type: Counter	Int32
ikev2-notifrecv-httpcertsupp	Description: Total IKEv2 Notify message receive statistics (HTTP certificate lookup supported). Type: Counter	Int32
ikev2-notifrecv-rekeysa	Description: Total IKEv2 Notify message receive statistics (rekey SA). Type: Counter	Int32
ikev2-notifrecv-nonfirstfragalso	Description: Total IKEv2 Notify message receive statistics (non-first fragment also). Type: Counter	Int32

Variables	Description	Data Type
ikev2-notifrecv-mobikesupp	Description: Total IKEv2 Notify message receive statistics (MOBIKE supported). Type: Counter	Int32
ikev2-notifrecv-addip4addr	Description: Total IKEv2 Notify message receive statistics (additional IPv4 address). Type: Counter	Int32
ikev2-notifrecv-addip6addr	Description: Total IKEv2 Notify message receive statistics (additional IPv6 address). Type: Counter	Int32
ikev2-notifrecv-noaddaddr	Description: Total IKEv2 Notify message receive statistics (no additional address). Type: Counter	Int32
ikev2-notifrecv-updsaaddr	Description: Total IKEv2 Notify message receive statistics (update SA addresses). Type: Counter	Int32
ikev2-notifrecv-cookie2	Description: Total IKEv2 Notify message receive statistics (cookie 2). Type: Counter	Int32
ikev2-notifrecv-nonatallow	Description: Total IKEv2 Notify message receive statistics (no NAT allowed). Type: Counter	Int32
ikev2-notifrecv-other	Description: Total IKEv2 Notify message receive statistics (others or unknown). Type: Counter	Int32
ikev2-notifrecv-sipfallbnotallow	Description: Total IKEv2 Notify message receive statistics (SIP fallback not allowed). Type: Counter	Int32
ikev2-notifrecv-esptfcpadnotsupp	Description: Total IKEv2 Notify message receive statistics (ESP TFC padding not supported). Type: Counter	Int32
ikev2-notifrecv-congrejrecv	Description: Total IKEv2 Notify message receive statistics (congestion rejections received). Type: Counter	Int32
ikev2-cert-reqsent	Description: Total IKEv2 certification statistics (certificate requests sent). Type: Counter	Int32
ikev2-cert-reqrecv	Description: Total IKEv2 certification statistics (certificate requests received). Type: Counter	Int32
ikev2-cert-sent	Description: Total IKEv2 certification statistics (certificates sent). Type: Counter	Int32
ikev2-cert-recv	Description: Total IKEv2 certification statistics (certificates received). Type: Counter	Int32
ike-udpflows	Description: IKE statistics (current UDP flows). Type: Gauge	Int32
ike-cookieflows	Description: IKE statistics (current cookie flows). Type: Gauge	Int32
ike-txpackets	Description: Total IKE Transmit statistics (IKE packets transmitted). Type: Counter	Int32

Variables	Description	Data Type
ike-rxpackets	Description: Total IKE Receive statistics (IKE packets received). Type: Counter	Int32
ike-regrecv	Description: Total IKE Receive statistics (new IKE requests). Type: Counter	Int32
ike-udpflowpackets	Description: Total IKE Receive statistics (UDP flow packets). Type: Counter	Int32
ike-cookieflowpackets	Description: Total IKE Receive statistics (cookie flow packets). Type: Counter	Int32
crypto-txesppacket	Description: Total Transmit statistics (ESP encoded packets). Type: Counter	Int64
crypto-txespoctet	Description: Total Transmit statistics (ESP encoded bytes). Type: Counter	Int64
crypto-txahpacket	Description: Total Transmit statistics (Authentication Header encoded packets). Type: Counter	Int64
crypto-txahoctet	Description: Total Transmit statistics (Authentication Header encoded bytes). Type: Counter	Int64
crypto-rxesppacket	Description: Total Receive statistics (ESP decoded packets). Type: Counter	Int64
crypto-rxespoctet	Description: Total Receive statistics (ESP decoded bytes). Type: Counter	Int64
crypto-rxahpacket	Description: Total Receive statistics (Authentication Header encoded packets). Type: Counter	Int64
crypto-rxahoctet	Description: Total Receive statistics (Authentication Header encoded bytes). Type: Counter	Int64
crypto-errauthpacket	Description: Total Receive statistics (error counter—authentication packets). Type: Counter	Int64
crypto-errauthoctet	Description: Total Receive statistics (error counter-authentication bytes). Type: Counter	Int64
crypto-errbadrecpacket	Description: Total Receive statistics (error counter-bad record packets). Type: Counter	Int64
crypto-errbadrecoctet	Description: Total Receive statistics (error counter-bad record bytes). Type: Counter	Int64
crypto-errdisppacket	Description: Total Receive statistics (error counter—discarded packets). Type: Counter	Int64
crypto-errdiscoctet	Description: Total Receive statistics (error counter—discarded bytes). Type: Counter	Int64
crypto-errignpacket	Description: Total Receive statistics (error counter—ignored packets). Type: Counter	Int64

Variables	Description	Data Type
crypto-errignoctet	Description: Total Receive statistics (error counter—ignored bytes). Type: Counter	Int64
crypto-errunderrunpacket	Description: Total Receive statistics (error counter—input under-run packets). Type: Counter	Int64
crypto-errunderrunoctet	Description: Total Receive statistics (error counter—input under-run bytes). Type: Counter	Int64
crypto-errinvpacket	Description: Total Receive statistics (error counter—invalid packets). Type: Counter	Int64
crypto-errinvoctet	Description: Total Receive statistics (error counter—invalid bytes). Type: Counter	Int64
crypto-erreplaypacket	Description: Total Receive statistics (error counter—replay packets). Type: Counter	Int64
crypto-erreplayoctet	Description: Total Receive statistics (error counter—replay bytes). Type: Counter	Int64
ipsecctrl-lte-template-reqs	Description: IPSec Controller - LTE - The total number of service template request messages. Type: Counter	Int32
ipsecctrl-lte-template-unreg-reqs	Description: IPSec Controller - LTE - The total number of service template unregister request messages. Type: Counter	Int32
ipsecctrl-lte-map-reqs	Description: IPSec Controller - LTE - The total number of crypto map request messages. Type: Counter	Int32
ipsecctrl-lte-map-est	Description: IPSec Controller - LTE - The total number of crypto map established messages. Type: Counter	Int32
ipsecctrl-lte-map-del-reqs	Description: IPSec Controller - LTE - The total number of crypto map delete request messages. Type: Counter	Int32
ipsecctrl-lte-map-failed	Description: IPSec Controller - LTE - The total number of crypto map failed messages. Type: Counter	Int32
ipsecctrl-lte-map-state-notif	Description: IPSec Controller - LTE - The total number of crypto map state change notifications sent by this system. Type: Counter	Int32
ipsecctrl-lte-ipsecmgr-death-notif	Description: IPSec Controller - LTE - The total number of ipsecmgr death notification messages sent to the registered facilities. Type: Counter	Int32
ipsecctrl-lte-qos-maps	Description: IPSec Controller - LTE - The total number of crypto maps with QoS. Type: Gauge	Int32

Variables	Description	Data Type
ssl-cursess	Description: This proprietary gauge indicates the total number of SSL sessions currently running on the system. Type: Gauge	Int64
ssl-curconninit	Description: This proprietary gauge indicates the total number of current SSL connections that have been initiated. Type: Gauge	Int64
ssl-curconnresp	Description: This proprietary gauge indicates the total number of current SSL connections that have been responded to. Type: Gauge	Int64
ssl-curconnected	Description: This proprietary gauge indicates the total number of current SSL connections that are connected. Type: Gauge	Int64
ssl-curconnfail	Description: This proprietary gauge indicates the total number of current SSL connections that have failed. Type: Gauge	Int64
ssl-curconnecting	Description: This proprietary gauge indicates the total number of current SSL connections that are connecting. Type: Gauge	Int64
ssl-conclosesent	Description: This proprietary counter tracks the total number of SSL connection close messages sent. Type: Counter	Int64
ssl-concloserecvd	Description: This proprietary counter tracks the total number of SSL connection close messages received. Type: Counter	Int64
ssl-cachehits	Description: This proprietary counter tracks the total number of hits for the SSL session cache. Type: Counter	Int64
ssl-cachemiss	Description: This proprietary counter tracks the total number of misses for the SSL session cache. Type: Counter	Int64
ssl-cachetimeout	Description: This proprietary counter tracks the total number of timeouts for the SSL session cache. Type: Counter	Int64
ssl-cachefull	Description: This proprietary counter tracks the total number of times the SSL session cache has been full. Type: Counter	Int64
ssl-cachetotalsess	Description: This proprietary counter tracks the total number of current sessions for the SSL session cache. Type: Gauge	Int64
ssl-txrecord	Description: This proprietary counter tracks the total number of SSL records transmitted. Type: Counter	Int64

Variables	Description	Data Type
ssl-txmsg	Description: This proprietary counter tracks the total number of SSL messages transmitted. Type: Counter	Int64
ssl-txbyte	Description: This proprietary counter tracks the total number of SSL bytes transmitted. Type: Counter	Int64
ssl-rxrecord	Description: This proprietary counter tracks the total number of SSL records received. Type: Counter	Int64
ssl-rxmsg	Description: This proprietary counter tracks the total number of SSL messages transmit received. Type: Counter	Int64
ssl-rxbyte	Description: This proprietary counter tracks the total number of SSL bytes received. Type: Counter	Int64
ssl-encerr	Description: This proprietary counter tracks the total number of SSL encryption errors. Type: Counter	Int64
ssl-decerr	Description: This proprietary counter tracks the total number of SSL decode errors. Type: Counter	Int64
ssl-decryerr	Description: This proprietary counter tracks the total number of SSL decryption errors. Type: Counter	Int64
ssl-autherr	Description: This proprietary counter tracks the total number of SSL authentication errors. Type: Counter	Int64
ssl-failinithserr	Description: This proprietary counter tracks the total number of SSL initiated handshakes failed with errors. Type: Counter	Int64
ssl-failtimeouthserr	Description: This proprietary counter tracks the total number of SSL handshakes failed with timeouts. Type: Counter	Int64
ssl-failresphserr	Description: This proprietary counter tracks the total number of SSL responded handshakes failed with errors. Type: Counter	Int64
ssl-alertrecv	Description: This proprietary counter tracks the total number of SSL alerts received. Type: Counter	Int64
ssl-alertrecv-unexpmsg	Description: This proprietary counter tracks the total number of SSL alerts received for unexpected message. Type: Counter	Int64
ssl-alertrecv-badrecmac	Description: This proprietary counter tracks the total number of SSL alerts received for bad MAC record. Type: Counter	Int64
ssl-alertrecv-decryfail	Description: This proprietary counter tracks the total number of SSL alerts received for decryption failure. Type: Counter	Int64

Variables	Description	Data Type
ssl-alertrecv-compfail	Description: This proprietary counter tracks the total number of SSL alerts received for decompression failure. Type: Counter	Int64
ssl-alertrecv-recoflow	Description: This proprietary counter tracks the total number of SSL alerts received for record overflow. Type: Counter	Int64
ssl-alertrecv-handshake	Description: This proprietary counter tracks the total number of SSL alerts received for handshake failure. Type: Counter	Int64
ssl-alertrecv-illparm	Description: This proprietary counter tracks the total number of SSL alerts received for illegal parameters. Type: Counter	Int64
ssl-alertrecv-certunsupp	Description: This proprietary counter tracks the total number of SSL alerts received for unsupported certificates. Type: Counter	Int64
ssl-alertrecv-certbad	Description: This proprietary counter tracks the total number of SSL alerts received for bad certificate. Type: Counter	Int64
ssl-alertrecv-certexpir	Description: This proprietary counter tracks the total number of SSL alerts received - certificate expired. Type: Counter	Int64
ssl-alertrecv-certrevok	Description: Number of SSL alerts received for certificate revoked. Type: Counter	Int64
ssl-alertrecv-certunk	Description: This proprietary counter tracks the total number of SSL alerts received for certificate unknown. Type: Counter	Int64
ssl-alertrecv-accdeny	Description: This proprietary counter tracks the total number of SSL alerts received for access denied. Type: Counter	Int64
ssl-alertrecv-decode	Description: This proprietary counter tracks the total number of SSL alerts received for decode errors. Type: Counter	Int64
ssl-alertrecv-decryerr	Description: Number of SSL alerts received - decryption error. Type: Counter	Int64
ssl-alertrecv-export	Description: This proprietary counter tracks the total number of SSL alerts received for export restricted. Type: Counter	Int64
ssl-alertrecv-protover	Description: This proprietary counter tracks the total number of SSL alerts received for protocol version. Type: Counter	Int64

Variables	Description	Data Type
ssl-alertrecv-interr	Description: This proprietary counter tracks the total number of SSL alerts received for internal errors. Type: Counter	Int64
ssl-alertrecv-insuffsec	Description: This proprietary counter tracks the total number of SSL alerts received for insufficient security. Type: Counter	Int64
ssl-alertrecv-usercanc	Description: This proprietary counter tracks the total number of SSL alerts received for user cancellation. Type: Counter	Int64
ssl-alertrecv-noreneg	Description: This proprietary counter tracks the total number of SSL alerts received for no renegotiation. Type: Counter	Int64
ssl-alertrecv-unknownca	Description: This proprietary counter tracks the total number of SSL alerts received for unknown certificate authority. Type: Counter	Int64
ssl-alertsent	Description: This proprietary counter tracks the total number of SSL alerts sent. Type: Counter	Int64
ssl-alertsent-unexpmsg	Description: This proprietary counter tracks the total number of SSL alerts sent for unexpected messages. Type: Counter	Int64
ssl-alertsent-badrecmac	Description: This proprietary counter tracks the total number of SSL alerts sent for bad MAC records. Type: Counter	Int64
ssl-alertsent-decryfailed	Description: This proprietary counter tracks the total number of SSL alerts sent for decryption failed. Type: Counter	Int64
ssl-alertsent-recoflow	Description: This proprietary counter tracks the total number of SSL alerts sent for record overflow. Type: Counter	Int64
ssl-alertsent-handshake	Description: This proprietary counter tracks the total number of SSL alerts sent for handshake failure. Type: Counter	Int64
ssl-alertsent-illparam	Description: This proprietary counter tracks the total number of SSL alerts sent for illegal parameters. Type: Counter	Int64
ssl-alertsent-accdenied	Description: This proprietary counter tracks the total number of SSL alerts sent for access denied. Type: Counter	Int64
ssl-alertsent-decodeerror	Description: This proprietary counter tracks the total number of SSL alerts sent for decode error. Type: Counter	Int64

Variables	Description	Data Type
ssl-alertsent-decrypterror	Description: This proprietary counter tracks the total number of SSL alerts sent for decryption error. Type: Counter	Int64
ssl-alertsent-export	Description: This proprietary counter tracks the total number of SSL alerts sent for export restriction. Type: Counter	Int64
ssl-alertsent-protover	Description: This proprietary counter tracks the total number of SSL alerts sent for protocol version. Type: Counter	Int64
ssl-alertsent-interr	Description: This proprietary counter tracks the total number of SSL alerts sent for internal error. Type: Counter	Int64
ssl-alertsent-noregen	Description: This proprietary counter tracks the total number of SSL alerts sent for no renegotiation. Type: Counter	Int64
ssl-alertsent-unknown	Description: This proprietary counter tracks the total number of SSL alerts sent for unknown reason. Type: Counter	Int64
hamipv6-totsubscriber	Description: Current number of system-wide HAMIPv6 subscribers. Type: Gauge	Int32
disc-reason-0 through disc-reason-xxx	Description: Refer to the separate table for disconnect reasons System-level Schema Statistics for Disconnect Reasons Type: Counter	Int64
enddate	Description: The date at which data ceased to be gathered in YYYYMMDD format where YYYY represents the year, MM represents the month and DD represents the day. Type: Information	String
endtime	Description: The time at which data ceased to be gathered in HHMMSS format where HH represents the hours, MM represents the minutes, and SS represents the seconds. Type: Information	String
localenddate	Description: The date (adjusted for the local timezone) at which data ceased to be gathered in YYYYMMDD format where YYYY represents the year, MM represents the month and DD represents the day. Type: Information	String
localendtime	Description: The time (adjusted for the local timezone) at which data ceased to be gathered in HHMMSS format where HH represents the hours, MM represents the minutes, and SS represents the seconds. Type: Information	String
swversion	Description: The system software version in a string of the form “5.0” Type: Information	String
peak-cpuusage	Description: The system level maximum value of CPU usage. Type: Gauge	Float

Variables	Description	Data Type
peak-memusage	Description: The system level maximum value of memory usage. Type: Gauge	Float
uptimestr	Description: The system uptime as a string that shows days, hours, and minutes. Type: Information	String
system-capacity-usage	Description: Chassis wide system capacity usage Type: Gauge	Float
session-capacity	Description: Chassis wide session capacity Type: Gauge	Int32
session-capacity-usage	Description: Chassis wide session capacity usage Type: Gauge	Int32
npu-capacity	Description: Chassis wide NPU capacity Type: Gauge	Int32
npu-capacity-usage	Description: Chassis wide NPU capacity usage Type: Gauge	Int32
sess-max-lastreset-time	Description: The timestamp the last reset for the maximum number of sessions. Type: Information	String
sess-maxpsdn	Description: The maximum number of PDSN sessions. Type: Gauge	Int32
sess-maxpsdn-time	Description: The timestamp for max PDSN sessions. Type: Information	String
sess-maxha	Description: The maximum number of HA sessions. Type: Gauge	Int32
sess-maxha-time	Description: The timestamp for maximum number of HA sessions. Type: Information	String
sess-maxl2tplns	Description: The maximum number of L2TP LNS sessions. Type: Gauge	Int32
sess-maxl2tplns-time	Description: The timestamp for maximum number of L2TP sessions. Type: Information	String
sess-maxecsv2	Description: The maximum number of ECsv2 sessions. Type: Gauge	Int32
sess-maxecsv2-time	Description: The timestamp for maximum number of ECsv2 sessions. Type: Information	String
sess-maxevdoreva-psdn	Description: The maximum number of EVDO Rev A sessions. Type: Gauge	Int32
sess-maxevdoreva-psdn-time	Description: The timestamp for maximum number of EVDO Rev A Sessions. Type: Information	String
sess-maxipsg	Description: The maximum number of IP Services Gateway (IPSG) sessions. Type: Gauge	Int32

Variables	Description	Data Type
sess-maxipsg-time	Description: The timestamp for maximum number of IPSG sessions. Type: Information	String
sess-maxasngw	Description: The maximum number of Access Service Network Gateway (ASN-GW) sessions. Type: Gauge	Int32
sess-maxasngw-time	Description: The timestamp for maximum number of ASN-GW sessions. Type: Information	String
sess-maxasnlr	Description: The maximum number of Access Service Network Gateway location Register (ASNLR) sessions. Type: Gauge	Int32
sess-maxasnlr-time	Description: The timestamp for maximum number of ASNLR sessions. Type: Information	String
lic-pdsn	Description: The number of licensed PDSN sessions supported by the system. Type: Information	Int32
lic-ha	Description: The number of licensed HA sessions supported by the system. Type: Information	Int32
lic-ggsn	Description: The number of licensed GGSN sessions supported by the system. Type: Information	Int32
lic-l2tplns	Description: The number of licensed L2TP LNS sessions supported by the system. Type: Information	Int32
lic-combo-phone	Description: The number of licensed combo phone sessions supported by the system Type: Information	Int32
lic-ecsv2	Description: The number of licensed Enhanced Charging Service version 2 sessions supported by the system. Type: Information	Int32
lic-ipservices-gateway	Description: The number of licensed IP Services Gateway sessions supported by the system. Type: Information	Int32
lic-evdoreva-pdsn	Description: The number of licensed EVDO rev. A PDSN sessions supported by the system. Type: Information	Int32
lic-scm-proxyregistrar-ietfRFC3261	Description: The number of licensed Session Control Manager (SCM) proxy server IETF RFC3261 sessions supported by the system. Type: Information	Int32
lic-scm-proxypcscf	Description: The number of licensed SCM proxy Call Service Control Function (CSCF) sessions supported by the system Type: Information	Int32
lic-scm-servingscscf	Description: The number of licensed SCM serving CSCF sessions supported by the system. Type: Information	Int32

Variables	Description	Data Type
lic-scm-interrogatingicscf	Description: The number of licensed SCM interrogating CSCF sessions supported by the system. Type: Information	Int32
lic-asngw	Description: The number of licensed Access Service Network (ASN) Gateway sessions supported by the system. Type: Information	Int32
lic-asnlr	Description: The number of ASN Location Register sessions supported by the system. Type: Information	Int32
lic-ipsg	Description: The number of IPSG Location Register sessions supported by the system. Type: Information	Int32
lic-combo-3g4g-gw	Description: The number of licensed sessions supported for generic 3G and 4G combined subscribers by the system. Type: Information	Int32
sess-total-curr	Description: The total number of sessions currently registered with system. Type: Gauge	Int32
curr-proxy	Description: The total number of current DHCP proxy sessions. Type: Gauge	Int32
curr-relay-agent	Description: The total number of current DHCP relay agent sessions. Type: Gauge	Int32
dhcp-curservsess	Description: The total number of DHCP service sessions active on this system. Availability: Available across the system. Changes every time when the new DHCP server is started or existing session is terminated. Type: Gauge	Int32
sess-total-setup	Description: The total number of DHCP setup sessions. Type: Counter	Int32
setup-proxy	Description: The total number of setup DHCP proxy sessions. Type: Counter	Int32
setup-relay-agent	Description: The total number of DHCP setup relay agent sessions. Type: Counter	Int32
dhcp-ttlservsess	Description: The total number of DHCP service sessions registered on this system. Availability: Available across the system. Changes every time when the new DHCP session started. Type: Counter	Int32
total-released	Description: The total number of DHCP sessions released. Type: Counter	Int32
proxy-bearer-call-term	Description: The total number of DHCP proxy session calls terminated by bearer. Type: Counter	Int32
proxy-lease-exp-policy	Description: The total number of DHCP proxy session released due to lease expiry policy. Type: Counter	Int32

Variables	Description	Data Type
proxy-lease-renew-failure	Description: The total number of DHCP proxy session released due to lease renew failure. Type: Counter	Int32
proxy-ip-mis-match	Description: The total number of DHCP proxy session released due to IP address mis-match. Type: Counter	Int32
proxy-lease-time-mis-match	Description: The total number of DHCP proxy session released due to lease time mis-match. Type: Counter	Int32
proxy-other-reasons	Description: The total number of DHCP proxy session released due reasons not mentioned in this table. Type: Counter	Int32
relay-admin-releases	Description: The total number of DHCP relay session released due administrative reasons. Type: Counter	Int32
relay-bearer-call-term	Description: The total number of DHCP relay session calls terminated by bearer. Type: Counter	Int32
relay-lease-time-out	Description: The total number of DHCP relay session released due to lease timeout. Type: Counter	Int32
relay-other-reasons	Description: The total number of DHCP relay session released due reasons not mentioned in this table. Type: Counter	Int32
dhcp-servdisc-admin	Description: The total number of DHCP servers disconnected due administrative reasons. Availability: Available across the system. Changes whenever the DHCP session is disconnected due to admin intervention. Type: Counter	Int32
dhcp-servdisc-callterm	Description: The total number of DHCP session calls terminated by bearer. Availability: Available across the system. Changes whenever the DHCP call is cleared due to arrival of DHCP Release. Type: Counter	Int32
dhcp-servdisc-leaseimo	Description: The total number of DHCP session released due to lease timeout. Availability: Available across the system. Changes whenever the DHCP session is released due to lease expiry. Type: Counter	Int32
dhcp-servdisc-other	Description: The total number of DHCP server sessions disconnected due to reasons other than those in this table. Type: Counter	Int32
dhcp-msg-discover-tx	Description: The total number of DHCP discover messages transmitted. Type: Counter	Int32
dhcp-msg-discover-retransmitted	Description: The total number of DHCP discover messages retransmitted. Type: Counter	Int32
dhcp-msg-discover-rx	Description: The total number of DHCP discover messages received. Type: Counter	Int32

Variables	Description	Data Type
dhcp-msg-discover-retried-rx	Description: The total number of DHCP discover messages received after retry. Type: Counter	Int32
dhcp-msg-discover-relayed	Description: The total number of DHCP discover messages relayed. Type: Counter	Int32
dhcp-msg-discoverd-retried-relayed	Description: The total number of DHCP discover messages retried and relayed. Type: Counter	Int32
dhcp-msg-offer-rx	Description: The total number of DHCP offer messages received. Type: Counter	Int32
dhcp-msg-offer-discarded	Description: The total number of DHCP offer messages received and discarded. Type: Counter	Int32
dhcp-msg-offer-tx	Description: The total number of DHCP offer messages transmitted. Type: Counter	Int32
dhcp-msg-offer-relayed	Description: The total number of DHCP offer messages relayed. Type: Counter	Int32
dhcp-msg-request-tx	Description: The total number of DHCP request messages transmitted. Type: Counter	Int32
dhcp-msg-request-retransmitted	Description: The total number of DHCP request messages retransmitted. Type: Counter	Int32
dhcp-msg-request-rx	Description: The total number of DHCP request messages received. Type: Counter	Int32
dhcp-msg-request-renewal-rx	Description: The total number of DHCP request messages received for renewal. Type: Counter	Int32
dhcp-msg-request-requesting-relayed	Description: The total number of DHCP request messages relayed while requesting. Type: Counter	Int32
dhcp-msg-request-renewing-relayed	Description: The total number of DHCP request messages relayed while renewing. Type: Counter	Int32
dhcp-msg-ack-rx	Description: The total number of DHCP Ack messages received. Type: Counter	Int32
dhcp-msg-ack-for-inform	Description: The total number of DHCP Ack messages received for information. Type: Counter	Int32
dhcp-msg-ack-renewing-rx	Description: The total number of DHCP Ack messages for renewing received. Type: Counter	Int32
dhcp-msg-ack-tx	Description: The total number of DHCP Ack messages transmitted. Type: Counter	Int32
dhcp-msg-ack-renewing-tx	Description: The total number of DHCP Ack messages for renewing transmitted. Type: Counter	Int32
dhcp-msg-ack-relayed	Description: The total number of DHCP Ack messages relayed. Type: Counter	Int32

Variables	Description	Data Type
dhcp-msg-ack-renewing-relayed	Description: The total number of DHCP Ack messages for renewing relayed. Type: Counter	Int32
dhcp-msg-nak-rx	Description: The total number of DHCP NACK messages received. Type: Counter	Int32
dhcp-msg-nak-for-inform	Description: The total number of DHCP NACK messages received for information. Type: Counter	Int32
dhcp-msg-nak-tx	Description: The total number of DHCP NACK messages transmitted. Type: Counter	Int32
dhcp-msg-nak-relayed	Description: The total number of DHCP NACK messages relayed. Type: Counter	Int32
dhcp-msg-decline-tx	Description: The total number of DHCP decline messages transmitted. Type: Counter	Int32
dhcp-msg-decline-rx	Description: The total number of DHCP decline messages received. Type: Counter	Int32
dhcp-msg-decline-relayed	Description: The total number of DHCP decline messages relayed. Type: Counter	Int32
dhcp-msg-release-tx	Description: The total number of DHCP release messages transmitted. Type: Counter	Int32
dhcp-msg-release-rx	Description: The total number of DHCP release messages received. Type: Counter	Int32
dhcp-msg-release-relayed	Description: The total number of DHCP release messages relayed. Type: Counter	Int32
dhcp-msg-release-for-relay-call	Description: The total number of DHCP release messages for relay calls. Type: Counter	Int32
dhcp-msg-inform-tx	Description: The total number of DHCP inform messages transmitted. Type: Counter	Int32
dhcp-msg-inform-retransmitted	Description: The total number of DHCP inform messages retransmitted. Type: Counter	Int32
dhcp-msg-inform-rx	Description: The total number of DHCP inform messages received. Type: Counter	Int32
dhcp-msg-inform-relayed	Description: The total number of DHCP inform messages relayed. Type: Counter	Int32
offer-dis-parse-err	Description: The total number of DHCP offer messages discarded due to parse error. Type: Counter	Int32
offer-dis-lease-less-than-min	Description: The total number of DHCP offer messages discarded due to lease time was less than the minimum duration. Type: Counter	Int32

Variables	Description	Data Type
offer-dis-lease-greater-than-max	Description: The total number of DHCP offer messages discarded due to lease time was greater than the maximum duration. Type: Counter	Int32
offer-dis-ip-val-failed	Description: The total number of DHCP offer messages discarded due to IP validation failed. Type: Counter	Int32
offer-dis-xid-mis-match	Description: The total number of DHCP offer messages discarded due to exchange id mismatch. Type: Counter	Int32
ack-dis-parse-err	Description: The total number of DHCP Ack messages discarded due to parse error. Type: Counter	Int32
ack-dis-xid-mis-match	Description: The total number of DHCP Ack messages discarded due to exchange id mismatch. Type: Counter	Int32
decline-dis-ip-mis-match	Description: The total number of DHCP decline messages discarded due to IP address mismatch. Type: Counter	Int32
ip-lease-renewal	Description: The total number of DHCP IP lease renewals. Type: Counter	Int32
failed-ip-lease-renew	Description: The total number of DHCP IP lease renewals failed. Type: Counter	Int32
no-rly-from-server	Description: The total number of replies from DHCP server. Type: Counter	Int32
server-nak	Description: The total number of NACK replies from DHCP server. Type: Counter	Int32
ip-addr-mis-match	Description: The total number of IP address mis-match in DHCP session. Type: Counter	Int32
lease-mis-match	Description: The total number of lease time mis-match in DHCP session. Type: Counter	Int32
discover-dis-parse-err	Description: The total number of discover messages discarded due to a parsing error. Type: Counter	Int32
request-dis-parse-err	Description: The total number of request messages discarded due to a parsing error. Type: Counter	Int32
release-dis-parse-err	Description: The total number of release messages discarded due to a parsing error. Type: Counter	Int32
storage-name	Description: Name of the Hard Disk Storage policy. Type: Information	String
storage-curavail	Description: Total storage space currently remaining (in bytes). Type: Gauge	Int64

Variables	Description	Data Type
storage-ttlavail	Description: Total storage capacity (in bytes). Type: Gauge	Int64
fng-cursess	Description: The total number of current Femto Network Gateway (FNG) sessions. Type: Gauge	Int32
fng-curactive	Description: The total number of active FNG sessions currently being facilitated by all Session Managers. Type: Gauge	Int32
fng-curdormant	Description: The total number of dormant FNG sessions currently being facilitated by the FNG. Type: Gauge	Int32
fng-ttlsetup	Description: The total number of FNG sessions setup on a system. Type: Counter	Int32
fng-curchildsa	Description: The total number of current FNG Child Security Associations. Type: Gauge	Int32
 Important: See <i>Statistics and Counters Overview</i> for statistics that are common to all schema.		

Another bulk-statistic for “Disconnect Reasons” under system-level schema is available to export system wide counts for disconnect reasons.

In the following table, the indicator number at the end of the statistic name will vary depending upon the software build in which the show command is issued. To ensure that you have the correct reason, issue the **show session disconnect-reasons verbose** command.

A special field “disc-reason-summary” contains all of the disconnect reason counters at once in following semi-colon separated format:

```
code = count; code = count; code = count; ..... code = count
```

The following variables are supported:

Table 67. System-level Schema Statistics for Disconnect Reasons

Reason No.	Description	Data Type
disc-reason-0	Name: Unknown Description: The total number of sessions disconnected due to unknown reason. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-1	Name: Admin-disconnect Description: The total number of sessions disconnected due to any of the following reasons: - Sessions disconnected when the Administrator issues the clear subscribers all CLI command. - Sessions disconnected by ECS due to any of the following reasons: - Bearer does not contain active rules—when the last bearer has no rules left as part of some PCRF trigger. - Charging-action has the flow action parameter configured as terminate-session. - Sessions disconnected by Diameter Credit Control Application (DCCA) due to any of the following reasons: - Result code 4010 or 4012 is received at the command level, and for CCR-Initial and CCR-Update Credit Control Failure Handling (CCFH) is configured as Terminate or Retry-and-Terminate. - Result code 5003 or 5030 is received at the command level. - Abort-Session-Request message is received. Type: Counter	Int64
disc-reason-2	Name: Remote-disconnect Description: The total number of sessions disconnected by a remote system. Type: Counter	Int64
disc-reason-3	Name: Local-disconnect Description: The total number of sessions disconnected by local system. Type: Counter	Int64
disc-reason-4	Name: No-resource Description: The total number of sessions disconnected due to non-availability of resources. Type: Counter	Int64
disc-reason-5	Name: Service-limit-exceeded Description: The total number of sessions disconnected due to exceed in service limit. Type: Counter	Int64
disc-reason-6	Name: PPP-LCP-negotiation-failed Description: The total number of sessions disconnected due to LCP negotiation failed. Type: Counter	Int64
disc-reason-7	Name: PPP-LCP-no-response Description: The total number of sessions disconnected due to no response in PPP-LCP session. Type: Counter	Int64
disc-reason-8	Name: PPP-LCP-loopback-detected Description: The total number of sessions disconnected due to loop back detected in PPP-LCP. Type: Counter	Int64
disc-reason-9	Name: PPP-LCP-max-retry-reached Description: The total number of sessions disconnected due to maximum retries in PPP-LCP session. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-10	Name: PPP-LCP-echo-failed Description: The total number of sessions disconnected due to PPP-LCP echo not received. Type: Counter	Int64
disc-reason-11	Name: PPP-Auth-failed Description: The total number of sessions disconnected due to authorization failed in PPP. Type: Counter	Int64
disc-reason-12	Name: PPP-Auth-failed-no-AAA-response Description: The total number of sessions disconnected due to authorization failed by no response on AAA server. Type: Counter	Int64
disc-reason-13	Name: PPP-Auth-failed-no-peer-response Description: The total number of sessions disconnected due to PPP authorization failed on no peer response. Type: Counter	Int64
disc-reason-14	Name: PPP-Auth-failed-max-retry-reached Description: The total number of sessions disconnected due to PPP authorization failed and reaching maximum retries limit. Type: Counter	Int64
disc-reason-15	Name: Invalid-AAA-attr-in-auth-response Description: The total number of sessions disconnected due to invalid AAA attributes in authorization response. Type: Counter	Int64
disc-reason-16	Name: Could-not-apply-subscriber-ACL Description: The total number of sessions disconnected due to inability in applying subscriber's Access Control List (ACL). Type: Counter	Int64
disc-reason-17	Name: Could-not-provide-service Description: The total number of sessions disconnected due to service is not available. Type: Counter	Int64
disc-reason-18	Name: AAA-return-IP-address-not-valid Description: The total number of sessions disconnected due to return IP address from AAA server is invalid. Type: Counter	Int64
disc-reason-19	Name: Pool-IP-address-not-valid Description: The total number of sessions disconnected due to IP address in pool is invalid. Type: Counter	Int64
disc-reason-20	Name: PPP-IPCP-negotiation-failed Description: The total number of sessions disconnected due to PPP-IPCP negotiation failed. Type: Counter	Int64
disc-reason-21	Name: PPP-IPCP-no-response Description: The total number of sessions disconnected due to no response in PPP-IPCP. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-22	Name: PPP-IPCP-max-retry-reached Description: The total number of sessions disconnected due to maximum retries in PPP-IPCP session. Type: Counter	Int64
disc-reason-23	Name: No-IPv4-address-for-subscriber Description: The total number of sessions disconnected due to no IPv4 address are available for subscriber. Type: Counter	Int64
disc-reason-24	Name: Inactivity-timeout Description: The total number of sessions disconnected due to system time out limit for silence (ideal) reached. Type: Counter	Int64
disc-reason-25	Name: Absolute-timeout Description: The total number of sessions disconnected due to timeout in complete session. Type: Counter	Int64
disc-reason-26	Name: Max-data-limit-exceeded Description: The total number of sessions disconnected due to maximum data limit exceeded. Type: Counter	Int64
disc-reason-27	Name: Invalid-source-IP-address Description: The total number of sessions disconnected due to invalid IPv4 address of subscriber. Type: Counter	Int64
disc-reason-28	Name: MSID-auth-failed Description: The total number of sessions disconnected due to MSID authentication failed. Type: Counter	Int64
disc-reason-29	Name: MSID-auth-failed-no-aaa-response Description: The total number of sessions disconnected due to MSID authentication failed and/or no response from AAA server. Type: Counter	Int64
disc-reason-30	Name: A11-max-retry-reached Description: The total number of sessions disconnected due to maximum limit for retries reached for A11 interface. Type: Counter	Int64
disc-reason-31	Name: A11-lifetime-expired Description: The total number of sessions disconnected due to A11 interface lifetime expired. Type: Counter	Int64
disc-reason-32	Name: A11-msg-integrity-failure Description: The total number of sessions disconnected due to failure in message integrity in A11 interface. Type: Counter	Int64
disc-reason-33	Name: PPP-LCP-remote-disconnect Description: The total number of sessions disconnected due to PPP-LCP remote disconnect. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-34	Name: Session-setup-timeout Description: The total number of sessions disconnected due to timeout in setting up of session. Type: Counter	Int64
disc-reason-35	Name: PPP-keepalive-failure Description: The total number of sessions disconnected due to PPP keepalive attribute failure. Type: Counter	Int64
disc-reason-36	Name: Flow-add-failed Description: The total number of sessions disconnected due to fail in adding flow to session. Type: Counter	Int64
disc-reason-37	Name: Call-type-detection-failed Description: The total number of sessions disconnected due to failure in call type detection. Type: Counter	Int64
disc-reason-38	Name: Wrong-ipcp-params Description: The total number of sessions disconnected due to invalid IPCP parameters. Type: Counter	Int64
disc-reason-39	Name: MIP-remote-dereg Description: The total number of sessions disconnected due to de-registration of Mobile IP on remote system. Type: Counter	Int64
disc-reason-40	Name: MIP-lifetime-expiry Description: The total number of sessions disconnected due to expiry of Mobile IP life time. Type: Counter	Int64
disc-reason-41	Name: MIP-proto-error Description: The total number of sessions disconnected due to protocol error in Mobile IP. Type: Counter	Int64
disc-reason-42	Name: MIP-auth-failure Description: The total number of sessions disconnected due to Mobile IP authentication failure. Type: Counter	Int64
disc-reason-43	Name: MIP-reg-timeout Description: The total number of sessions disconnected due to registration request timeout. Type: Counter	Int64
disc-reason-44	Name: Invalid-dest-context Description: The total number of sessions disconnected due to invalid destination context. Type: Counter	Int64
disc-reason-45	Name: Source-context-removed Description: The total number of sessions disconnected due to source context is removed from system. Type: Counter	Int64
disc-reason-46	Name: Destination-context-removed Description: The total number of sessions disconnected due to destination context is removed from system. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-47	Name: Required-service-address-unavailable Description: The total number of sessions disconnected due to unavailability of required service address. Type: Counter	Int64
disc-reason-48	Name: demux-mgr-failed-could-not-restart Description: The total number of sessions disconnected due to failure in demux-mgr. Type: Counter	Int64
disc-reason-49	Name: internal-error Description: The total number of sessions disconnected due to some internal system error. Type: Counter	Int64
disc-reason-50	Name: AAA-context-removed Description: The total number of sessions disconnected due to AAA context is removed from system. Type: Counter	Int64
disc-reason-51	Name: invalid-service-type Description: The total number of sessions disconnected due to invalid service type. Type: Counter	Int64
disc-reason-52	Name: mip-relay-req-failed Description: The total number of sessions disconnected due to failure in Mobile IP relay request. Type: Counter	Int64
disc-reason-53	Name: mip-rcvd-relay-failure Description: The total number of sessions disconnected due to failure in Mobile IP received. Type: Counter	Int64
disc-reason-54	Name: ppp_restart_inter_pdsn_handoff Description: The total number of sessions disconnected due to restart in inter PDSN handoff. Type: Counter	Int64
disc-reason-55	Name: gre-key-mismatch Description: The total number of sessions disconnected due to mismatch in Generic Routing Encapsulation (GRE) key. Type: Counter	Int64
disc-reason-56	Name: invalid-tunnel-context Description: The total number of sessions disconnected due to invalid Tunnel context. Type: Counter	Int64
disc-reason-57	Name: no-peer-lns-address Description: The total number of sessions disconnected due to no peer LNS address Type: Counter	Int64
disc-reason-58	Name: failed-tunnel-connect Description: The total number of sessions disconnected due to failure in Tunnel connect. Type: Counter	Int64
disc-reason-59	Name: l2tp-tunnel-disconnect-remote Description: The total number of L2TP sessions disconnected due to tunnel disconnected by remote system. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-60	Name: l2tp-tunnel-timeout Description: The total number of LT2P sessions disconnected due to tunnel timeout. Type: Counter	Int64
disc-reason-61	Name: l2tp-protocol-error-remote Description: The total number of LT2P sessions disconnected due to protocol error on remote system. Type: Counter	Int64
disc-reason-62	Name: l2tp-protocol-error-local Description: The total number of LT2P sessions disconnected due to protocol error on local system. Type: Counter	Int64
disc-reason-63	Name: l2tp-auth-failed-remote Description: The total number of LT2P sessions disconnected due to authorization failed on remote system. Type: Counter	Int64
disc-reason-64	Name: l2tp-auth-failed-local Description: The total number of LT2P sessions disconnected due to authorization failed on local system Type: Counter	Int64
disc-reason-65	Name: l2tp-try-another-lns-from-remote Description: The total number of LT2P sessions disconnected due to remote system tried for another LNS. Type: Counter	Int64
disc-reason-66	Name: l2tp-no-resource-local Description: The total number of LT2P sessions disconnected due to non-availability of resource on local system. Type: Counter	Int64
disc-reason-67	Name: l2tp-no-resource-remote Description: The total number of LT2P sessions disconnected due to non-availability of resource on remote system. Type: Counter	Int64
disc-reason-68	Name: l2tp-tunnel-disconnect-local Description: The total number of LT2P sessions disconnected due to tunnel disconnected on local system. Type: Counter	Int64
disc-reason-69	Name: l2tp-admin-disconnect-remote Description: The total number of LT2P sessions disconnected by administrator on remote system. Type: Counter	Int64
disc-reason-70	Name: l2tpmgr-reached-max-capacity Description: The total number of LT2P sessions disconnected due to L2TP Manager logging facility reached to maximum logging capacity. Type: Counter	Int64
disc-reason-71	Name: MIP-Reg-Revocation Description: The total number of sessions disconnected due to a failure in Mobile IP registration revocation. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-72	Name: path-failure Description: The total number of sessions disconnected due to path failure in connecting session. Type: Counter	Int64
disc-reason-73	Name: Dhcp-Relay-IP-Validation-Failed Description: The total number of sessions disconnected due to a failure with the validation of the IP addresses with DHCP relay method. Type: Counter	Int64
disc-reason-74	Name: Gtp-unknown-pdp-addr-or-pdp-type Description: The total number of sessions disconnected due to unknown PDP address or PDP type. Type: Counter	Int64
disc-reason-75	Name: Gtp-all-dynamic-pdp-addr-occupied Description: The total number of sessions disconnected due to all dynamic PDP addresses are occupied and no PDP address is available to allocate. Type: Counter	Int64
disc-reason-76	Name: Gtp-no-memory-is-available Description: The total number of sessions disconnected due to out of memory problem. Type: Counter	Int64
disc-reason-77	Name: dhcp-relay-static-ip-addr-not-allowed Description: The total number of sessions disconnected due to the mobile requesting the use of a static IP address when static IP address requests are not allowed. Type: Counter	Int64
disc-reason-78	Name: dhcp-no-ip-addr-allocated Description: The total number of sessions disconnected as no IP address is allocated on DHCP Server. Type: Counter	Int64
disc-reason-79	Name: dhcp-ip-addr-allocation-tmr-exp Description: The total number of sessions disconnected due to time expired for IP address allocation on DHCP Server. Type: Counter	Int64
disc-reason-80	Name: dhcp-ip-validation-failed Description: The total number of sessions disconnected due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context. Type: Counter	Int64
disc-reason-81	Name: dhcp-static-addr-not-allowed Description: The total number of sessions disconnected due to a failure with IP address in the static pool on destination context is not allowed by DHCP Server. Type: Counter	Int64
disc-reason-82	Name: dhcp-ip-addr-not-available-at-present Description: The total number of sessions disconnected due to non availability of IP address on DHCP Server. Type: Counter	Int64
disc-reason-83	Name: dhcp-lease-expired Description: The total number of sessions disconnected due to expiration of IP address lease time. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-84	Name: lpool-ip-validation-failed Description: The total number of sessions disconnected due to validation failure of IP address in IP pool. Type: Counter	Int64
disc-reason-85	Name: lpool-static-ip-addr-not-allowed Description: The total number of sessions disconnected due to specified static IP address is not allowed in IP pool. Type: Counter	Int64
disc-reason-86	Name: static-ip-validation-failed Description: The total number of sessions disconnected due to a failure in validation of static IP address on remote system. Type: Counter	Int64
disc-reason-87	Name: static-ip-addr-not-present Description: The total number of sessions disconnected due to allocated static address is removed or not available. Type: Counter	Int64
disc-reason-88	Name: static-ip-addr-not-allowed Description: The total number of sessions disconnected due to prohibition of defined static IP address. Type: Counter	Int64
disc-reason-89	Name: radius-ip-validation-failed Description: The total number of sessions disconnected due to a failure in IP address validation on RADIUS. Type: Counter	Int64
disc-reason-90	Name: radius-ip-addr-not-provided Description: The total number of sessions disconnected due to IP address is not provided by RADIUS. Type: Counter	Int64
disc-reason-91	Name: invalid-ip-addr-from-sgsn Description: The total number of sessions disconnected due to invalid IP address received from SGSN. Type: Counter	Int64
disc-reason-92	Name: no-more-sessions-in-aaa Description: The total number of sessions disconnected due to sessions cleared in AAA. Type: Counter	Int64
disc-reason-93	Name: ggsn-aaa-auth-req-failed Description: The total number of sessions disconnected due to authentication request failure between GGSN and AAA server. Type: Counter	Int64
disc-reason-94	Name: conflict-in-ip-addr-assignment Description: The total number of sessions disconnected due to conflict in IP address assignment. Type: Counter	Int64
disc-reason-95	Name: apn-removed Description: The total number of sessions disconnected because the APN was removed during the session. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-96	Name: credits-used-bytes-in Description: The total number of sessions disconnected due to exceeding the incoming data/bytes credit. Type: Counter	Int64
disc-reason-97	Name: credits-used-bytes-out Description: The total number of sessions disconnected due to exceeding the outgoing data/bytes credit. Type: Counter	Int64
disc-reason-98	Name: credits-used-bytes-total Description: The total number of sessions disconnected due to exceeding the total data/bytes credit. Type: Counter	Int64
disc-reason-99	Name: prepaid-failed Description: The total number of sessions disconnected due to a failure in processing prepaid account information. Type: Counter	Int64
disc-reason-100	Name: l2tp-ipsec-tunnel-failure Description: The total number of sessions disconnected due to the IPSec tunnel being failed to connect. Type: Counter	Int64
disc-reason-101	Name: l2tp-ipsec-tunnel-disconnected Description: The total number of sessions disconnected due to the IPSec tunnel being disconnected. Type: Counter	Int64
disc-reason-102	Name: mip-ipsec-sa-inactive Description: The total number of sessions disconnected due to in active security association (SA) of IPSec for specific Mobile IP address. Type: Counter	Int64
disc-reason-103	Name: Long-duration-timeout Description: The total number of sessions disconnected due to the expiration of the configured long-duration timer. Type: Counter	Int64
disc-reason-104	Name: proxy-mip-registration-failure Description: The total number of Proxy Mobile IP sessions disconnected due to Registration failures. Type: Counter	Int64
disc-reason-105	Name: proxy-mip-binding-update Description: The total number of Proxy Mobile IP sessions disconnected due to errors occurring during binding updates. Type: Counter	Int64
disc-reason-106	Name: proxy-mip-inter-pdsn-handoff-require-ip-address Description: The total number of Proxy Mobile IP sessions disconnected due to the mobile not providing the IP address it was assigned during IPCP negotiations resulting from inter-PDSN handoffs. Type: Counter	Int64
disc-reason-107	Name: proxy-mip-inter-pdsn-handoff-mismatched-address Description: The total number of Proxy Mobile IP sessions disconnected due to the mobile providing an IP address other than what it was assigned during IPCP negotiations resulting from inter-PDSN handoffs. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-108	Name: Local-purge Description: The total number of sessions disconnected due to a locally-initiated purge. Type: Counter	Int64
disc-reason-109	Name: failed-update-handoff Description: The total number of sessions disconnected due to failure in update handoff. Type: Counter	Int64
disc-reason-110	Name: closed_rp-handoff-complete Description: The total number of sessions disconnected due to handoff completed. Type: Counter	Int64
disc-reason-111	Name: closed_rp-duplicate-session Description: The total number of sessions disconnected due to duplicate session. Type: Counter	Int64
disc-reason-112	Name: closed_rp-handoff-session-not-found Description: The total number of sessions disconnected due to hand off session not found. Type: Counter	Int64
disc-reason-113	Name: closed_rp-handoff-failed Description: The total number of sessions disconnected due to handoff failed for session. Type: Counter	Int64
disc-reason-114	Name: pcf-monitor-keep-alive-failed Description: The total number of sessions disconnected due to the expiration of the configured max-inactivity timer indicating that the PCF was unavailable. Type: Counter	Int64
disc-reason-115	Name: call-internal-reject Description: The total number of sessions disconnected due to call rejected internally. Type: Counter	Int64
disc-reason-116	Name: call-restarted Description: The total number of sessions disconnected due to call restarted on unknown reason. Type: Counter	Int64
disc-reason-117	Name: a11-mn-ha-auth-failure Description: The total number of sessions disconnected due to failure in authentication between Mobile node and Home Agent (HA). Type: Counter	Int64
disc-reason-118	Name: a11-badly-formed Description: The total number of sessions disconnected as A11 interface is formed badly. Type: Counter	Int64
disc-reason-119	Name: a11-t-bit-not-set Description: The total number of sessions disconnected due to t-bit is not set in interface. Type: Counter	Int64
disc-reason-120	Name: a11-unsupported-vendor-id Description: The total number of sessions disconnected due to unsupported vendor Id in interface. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-121	Name: all-mismatched-id Description: The total number of sessions disconnected due to mismatched Id in All interface. Type: Counter	Int64
disc-reason-122	Name: mipha-dup-home-addr-req Description: The total number of sessions disconnected due to duplicate home address request on HA. Type: Counter	Int64
disc-reason-123	Name: mipha-dup-imsi-session Description: The total number of sessions disconnected due to duplicate IMSI in session on HA. Type: Counter	Int64
disc-reason-124	Name: ha-unreachable Description: The total number of sessions disconnected due to unreachable HA. Type: Counter	Int64
disc-reason-125	Name: IPSP-addr-in-use Description: The total number of sessions disconnected due to IP Pool Sharing Protocol address is in use/not free on HA. Type: Counter	Int64
disc-reason-126	Name: mipfa-dup-home-addr-req Description: The total number of sessions disconnected due to duplicate home address request on FA. Type: Counter	Int64
disc-reason-127	Name: mipha-ip-pool-busyout Description: The total number of sessions disconnected due to IP pool busyout. Type: Counter	Int64
disc-reason-128	Name: inter-pdsn-handoff Description: The total number of sessions disconnected due to inter-PDSN handoff failure. Type: Counter	Int64
disc-reason-129	Name: active-to-dormant Description: The total number of sessions disconnected due to system enters to dormant state from active state. Type: Counter Note: Sessions facilitated through PDSN Closed R-P services are always displayed as “Active” due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF.	Int64
disc-reason-130	Name: ppp-renegotiation Description: The total number of sessions disconnected due to failure/conflict in PPP renegotiation. Type: Counter	Int64
disc-reason-131	Name: active-start-parameter-change Description: The total number of sessions disconnected due to change in start parameters. Type: Counter	Int64
disc-reason-132	Name: accounting-tariff-boundary Description: The total number of sessions disconnected due to the closure of an accounting record based configured tariff time. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-133	Name: a11-disconnect-no-active-stop Description: The total number of sessions disconnected due to A11 interface is not active or stopped. Type: Counter	Int64
disc-reason-134	Name: nw-reachability-failed-reject Description: The total number of sessions disconnected due to failure in network reachability and request rejected. Type: Counter	Int64
disc-reason-135	Name: nw-reachability-failed-redirect Description: The total number of sessions disconnected due to failure in network reachability and request redirected. Type: Counter	Int64
disc-reason-136	Name: container-max-exceeded Description: The total number of sessions disconnected due to the closure of an accounting record based on the configured maximum number of container changes being exceeded. Type: Counter	Int64
disc-reason-137	Name: static-addr-not-allowed-in-apn Description: The total number of sessions disconnected due to static IP address is not allowed in APN. Type: Counter	Int64
disc-reason-138	Name: static-addr-required-by-radius Description: The total number of sessions disconnected due to static IP address required by RADIUS. Type: Counter	Int64
disc-reason-139	Name: static-addr-not-allowed-by-radius Description: The total number of sessions disconnected due to static IP address is not allowed by RADIUS. Type: Counter	Int64
disc-reason-140	Name: mip-registration-dropped Description: The total number of sessions disconnected due to registration dropped for Mobile IP address. Type: Counter	Int64
disc-reason-141	Name: counter-rollover Description: The total number of sessions disconnected due to counter rollover. Type: Counter	Int64
disc-reason-142	Name: constructed-nai-auth-failed Description: The total number of sessions disconnected due to authentication failure in subscriber's Network Access Identifier (NAI). Type: Counter	Int64
disc-reason-143	Name: inter-pdsn-service-optimize-handoff-disabled Description: The total number of sessions disconnected due to disabled inter-PDSN service optimization handoff. Type: Counter	Int64
disc-reason-144	Name: gre-key-collision Description: The total number of sessions disconnected due to collision in Generic Routing Encapsulation (GRE) key. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-145	Name: inter-pdsn-service-optimize-handoff-triggered Description: The total number of sessions disconnected when inter PDSN service optimization handoff triggered. Type: Counter	Int64
disc-reason-146	Name: intra-pdsn-handoff-triggered Description: The total number of sessions disconnected when intra-PDSN service optimization handoff triggered. Type: Counter	Int64
disc-reason-147	Name: delayed-abort-timer-expired Description: The total number of sessions disconnected due to abort timer duration expired. Type: Counter	Int64
disc-reason-148	Name: Admin-AAA-disconnect Description: The total number of sessions disconnected as AAA server disconnected Administratively. Type: Counter	Int64
disc-reason-149	Name: Admin-AAA-disconnect-handoff Description: The total number of sessions disconnected due to AAA handoff disconnected Administratively. Type: Counter	Int64
disc-reason-150	Name: PPP-IPv6CP-negotiation-failed Description: The total number of sessions disconnected due to IPv6CP negotiation failed. Type: Counter	Int64
disc-reason-151	Name: PPP-IPv6CP-no-response Description: The total number of sessions disconnected due to no response during IPv6CP negotiation. Type: Counter	Int64
disc-reason-152	Name: PPP-IPv6CP-max-retry-reached Description: The total number of sessions disconnected due to maximum retries failed on IPv6CP negotiation. Type: Counter	Int64
disc-reason-153	Name: PPP-Restart-Invalid-source-IPv4-address Description: The total number of sessions disconnected due to PPP restarted by invalid Pv4 address of source. Type: Counter	Int64
disc-reason-154	Name: all-disconnect-handoff-no-active-stop Description: The total number of sessions disconnected due to handoff in All interface is not active or stopped. Type: Counter	Int64
disc-reason-155	Name: call-restarted-inter-pdsn-handoff Description: The total number of sessions disconnected due to call restarted during inter PDSN handoff. Type: Counter	Int64
disc-reason-156	Name: call-restarted-ppp-termination Description: The total number of sessions disconnected due to call restarted on PPP termination. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-157	Name: mipfa-resource-conflict Description: The total number of sessions disconnected due to resource conflict on FA. Type: Counter	Int64
disc-reason-158	Name: failed-auth-with-charging-svc Description: The total number of sessions disconnected due to authentication failure in charging services. Type: Counter	Int64
disc-reason-159	Name: mipha-dup-imsi-session-purge Description: The total number of sessions disconnected due to clearing of duplicate IMSI in session on HA. Type: Counter	Int64
disc-reason-160	Name: mipha-rev-pending-newcall Description: The total number of sessions disconnected due to revival of pending new calls. Type: Counter	Int64
disc-reason-161	Name: volume-quota-reached Description: The total number of sessions disconnected due to allocated data quota volume reached. Type: Counter	Int64
disc-reason-162	Name: duration-quota-reached Description: The total number of sessions disconnected due to time-out reached. Type: Counter	Int64
disc-reason-163	Name: gtp-user-auth-failed Description: The total number of sessions disconnected due to a failure in user/subscriber authentication. Type: Counter	Int64
disc-reason-164	Name: MIP-Reg-Revocation-no-lcp-term Description: The total number of sessions disconnected due to termination of an MIP Session for a Revocation being received from the HA and the PDSN is not configured to send a LCP Terminate Request. Type: Counter	Int64
disc-reason-165	Name: MIP-private-ip-no-rev-tunnel Description: The total number of sessions disconnected due to no reverse tunnel for MIP. Type: Counter	Int64
disc-reason-166	Name: Invalid-Prepaid-AAA-attr-in-auth-response Description: The total number of sessions disconnected due to invalid Prepaid attribute in authentication response. Type: Counter	Int64
disc-reason-167	Name: mipha-prepaid-reset-dynamic-newcall Description: The total number of MIP HA sessions disconnected due to receiving MIP registration with a home address of 0.0.0.0. Type: Counter	Int64
disc-reason-168	Name: gre-flow-control-timeout Description: The total number of RP sessions disconnected due to the PCF not removing flow control for a specified amount of time if GRE flow control for RP sessions is enabled. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-169	Name: mip-paaa-bc-query-not-found Description: The total number of sessions that were disconnected because the binding cache was not found. Type: Counter	Int64
disc-reason-170	Name: mipha-dynamic-ip-addr-not-available Description: The total number of MIP HA sessions that were disconnected because a dynamic IP address was not available. Type: Counter	Int64
disc-reason-171	Name: a11-mismatched-id-on-handoff Description: The total number of sessions disconnected due to a mismatched ID in the A11 interface during a handoff. Type: Counter	Int64
disc-reason-172	Name: a11-badly-formed-on-handoff Description: The total number of sessions disconnected because the A11 interface is formed badly during a handoff. Type: Counter	Int64
disc-reason-173	Name: a11-unsupported-vendor-id-on-handoff Description: The total number of sessions disconnected due to unsupported vendor Id in the A11 interface during a handoff. Type: Counter	Int64
disc-reason-174	Name: a11-t-bit-not-set-on-handoff Description: The total number of sessions disconnected due to t-bit is not set in the A11 interface during a handoff. Type: Counter	Int64
disc-reason-175	Name: MIP-Reg-Revocation-i-bit-on Description: The total number of Mobile IP sessions disconnected at the PDSN/FA due to Revocation received from HA (with I bit set). Type: Counter	Int64
disc-reason-176	Name: a11-RRQ-Deny-Max-Count Description: The total number of sessions disconnected due to failures in processing A11-Registration-Request despite retries of the message by the PCF. Type: Counter	Int64
disc-reason-177	Name: Dormant-Transition-During-Session-Setup Description: The total number of sessions disconnected because they entered the dormant state during session setup. Type: Counter Note: Sessions facilitated through PDSN Closed R-P services are always displayed as “Active” due to the fact that PDSN Closed R-P services do not receive dormancy information from the PCF.	Int64
disc-reason-178	Name: PPP-Rem-Reneg-Disc-Always-Cfg Description: The total number of PPP sessions disconnected because they were renegotiated by the remote side by sending LCP Conf-req/nak/ack and the “always” option was used for the remote-renegotiation disconnect command/attribute. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-179	Name: PPP-Rem-Reneg-Disc-NAI-MSID-Mismatch Description: The total number of PPP sessions disconnected because they were renegotiated by the remote side by sending LCP Conf-req/nak/ack and the “nai-prefix-msid-mismatch” option was used for the remote-renegotiation disconnect command/attribute. Type: Counter	Int64
disc-reason-180	Name: mipha-subscriber-ipsec-tunnel-down Description: The total number of subscribers disconnected because the IPSec tunnel facilitating their sessions went down. Type: Counter	Int64
disc-reason-181	Name: mipha-subscriber-ipsec-tunnel-fail Description: The total number of subscribers disconnected because an IPSec tunnel failed to be established. Type: Counter	Int64
disc-reason-182	Name: mipha-subscriber-ipsecmgr-death Description: The total number of subscribers disconnected because the IPSec Manager software task facilitating their sessions crashed. Type: Counter	Int64
disc-reason-183	Name: flow-is-deactive Description: The total number of sessions disconnected because their respective flow was deactivated. Type: Counter	Int64
disc-reason-184	Name: ecs-license-exceeded Description: The total number of sessions disconnected because the licensed session capacity for the Enhanced Charging Service feature has been exceeded. Type: Counter	Int64
disc-reason-185	Name: IPSG-Auth-failed Description: The total number of sessions disconnected because IPSG authentication failed. Type: Counter	Int64
disc-reason-186	Name: driver-initiated Description: The total number of sessions disconnected due to driver initiation. Type: Counter	Int64
disc-reason-187	Name: ims-authorization-failed Description: The total number of sessions disconnected because of IMS authorization failures. Type: Counter	Int64
disc-reason-188	Name: service-instance-released Description: The total number of sessions disconnected because they were released by the service instances facilitating them. Type: Counter	Int64
disc-reason-189	Name: flow-release Description: The total number of sessions disconnected because their respective flows were released. Type: Counter	Int64
disc-reason-190	Name: ppp-renego-no-ha-addr Description: The total number of sessions disconnect because no HA address was supplied during PPP renegotiation. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-191	Name: intra-pdsn-handoff Description: The total number of sessions disconnected during an intra-PDSN service handoff. Type: Counter	Int64
disc-reason-192	Name: overload-disconnect Description: The total number of sessions disconnected because the configured overload-disconnect threshold has been exceeded. Type: Counter	Int64
disc-reason-193	Name: css-service-not-found Description: The total number of sessions because the CSS service specified for handling the session was not found. Type: Counter	Int64
disc-reason-194	This is not supported at this time.	Int64
disc-reason-195	Name: dhcp-client-sent-release Description: The total number of sessions disconnected because the DHCP client sent a release. Type: Counter	Int64
disc-reason-196	Name: dhcp-client-sent-nak Description: The total number of sessions disconnected because the DHCP client sent a negative acknowledge message. Type: Counter	Int64
disc-reason-197	Name: msid-dhcp-chaddr-mismatch Description: The total number of sessions disconnected because the DHCP Client Hardware (MAC) Address (CHADDR) does not match with MSID of the ASN-GW session. Type: Counter	Int64
disc-reason-198	Name: link-broken Description: The total number of sessions disconnected because the link between the SGSN and the GGSN is broken resulting in the termination of ongoing Diameter Credit-Control sessions with the DIAMETER_LINK_BROKEN termination-cause. Type: Counter	Int64
disc-reason-199	Name: prog-end-timeout Description: The total number of sessions disconnected because the allowed BCMCS program limit time expires. Type: Counter	Int64
disc-reason-200	Name: qos-update-wait-timeout Description: The total number of sessions disconnected because the PDSN failed to update QoS for them. Type: Counter	Int64
disc-reason-201	Name: css-synch-cause Description: The total number of sessions disconnected because the session-audit between the ACS Manager task and Session Manager disconnects any dangling sessions in the Session Manager. Type: Counter	Int64
disc-reason-202	Name: Gtp-context-replacement Description: The total number of sessions disconnected due to GTP context replacement. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-203	Name: PDIF-Auth-failed Description: The total number of sessions disconnected due to PDIF authentication process unable to set up a secure IPSec tunnel to subscriber. Type: Counter	Int64
disc-reason-204	Name: l2tp-unknown-apn Description: The total number of sessions disconnected due to unknown APN in L2TP message. Type: Counter	Int64
disc-reason-205	Name: ms-unexpected-network-reentry Description: The total number of sessions disconnected due unexpected network reentry by MS in Wimax network. Type: Counter	Int64
disc-reason-206	Name: r6-invalid-nai Description: The total number of sessions disconnected due invalid NAI in R6 message in WiMAX network. Type: Counter	Int64
disc-reason-207	Name: eap-max-retry-reached Description: The total number of sessions disconnected due maximum retry limit for EAP authentication exhausted in Wimax network. Type: Counter	Int64
disc-reason-208	Name: vbm-hoa-session-disconnected Description: The total number of disconnects that occurred between the Visitor Bearer Manager (VBM) and home network IP address (HoA). Type: Counter	Int64
disc-reason-209	Name: vbm-voa-session-disconnected Description: The total number of disconnects that occurred between the Visitor Bearer Manager (VBM) and visited address (VoA). Type: Counter	Int64
disc-reason-210	Name: in-acl-disconnect-on-violation Description: the total number of disconnects resulting from an inbound Access Control List violation. Type: Counter	Int64
disc-reason-211	Name: eap-msk-lifetime-expiry Description: The total number of sessions disconnected due to EAP Master Session Key lifetime expiry in Wimax network. Type: Counter	Int64
disc-reason-212	Name: eap-msk-lifetime-too-low Description: The total number of sessions disconnected due to EAP Master Session Key lifetime is too less to allow session. Type: Counter	Int64
disc-reason-213	Name: inter-service-handoff Description: The total number of sessions disconnected due to inter-service handoff in Wimax network. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-214	Name: r6-max-retry-reached Description: The total number of sessions disconnected due to maximum retry limit for R6 message exhausted in Wimax network. Type: Counter	Int64
disc-reason-215	Name: r6-nwexit-recd Description: The total number of sessions disconnected due to network exit message received on R6 interface in Wimax network. Type: Counter	Int64
disc-reason-216	Name: r6-dereg-req-recd Description: The total number of sessions disconnected due to de-registration message received on R6 interface in Wimax network. Type: Counter	Int64
disc-reason-217	Name: r6-remote-failure Description: The total number of sessions disconnected due to remote peer failure on R6 interface in Wimax network. Type: Counter	Int64
disc-reason-218	Name: r6r4-protocol-errors Description: The total number of sessions disconnected due to protocol error on R6 and/or R4 interface in Wimax network. Type: Counter	Int64
disc-reason-219	Name: wimax-qos-invalid-aaa-attr Description: The total number of sessions disconnected due to invalid AAA attributes for QoS to a subscriber in Wimax network. Type: Counter	Int64
disc-reason-220	Name: npu-gre-flows-not-available Description: The total number of sessions disconnected due to requested NPU GRE flow is not available for a subscriber in Wimax network. Type: Counter	Int64
disc-reason-221	Name: r4-max-retry-reached Description: The total number of sessions disconnected due to maximum retry limit for R4 message exhausted in Wimax network. Type: Counter	Int64
disc-reason-222	Name: r4-nwexit-recd Description: The total number of sessions disconnected due to network exit message received on R4 interface in Wimax network. Type: Counter	Int64
disc-reason-223	Name: r4-dereg-req-recd Description: The total number of sessions disconnected due to de-registration message received on R4 interface in Wimax network. Type: Counter	Int64
disc-reason-224	Name: r4-remote-failure Description: The total number of sessions disconnected due to remote peer failure on R4 interface in Wimax network. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-225	Name: ims-authorization-revoked Description: The total number of sessions disconnected due to IMS authorization revoked. Type: Counter	Int64
disc-reason-226	Name: ims-authorization-released Description: The total number of sessions disconnected due to IMS authorization released. Type: Counter	Int64
disc-reason-227	Name: ims-auth-decision-invalid Description: The total number of sessions disconnected due to invalid IMS authorization decision. Type: Counter	Int64
disc-reason-228	Name: mac-addr-validation-failed Description: The total number of sessions disconnected due to MAC address validation failure in WiMAX network. Type: Counter	Int64
disc-reason-229	Name: excessive-wimax-pd-flows-configured Description: The total number of sessions disconnected due to excessive packet data flows configured in WiMAX network. Type: Counter	Int64
disc-reason-230	Name: sgsn-cancel-location-subs-withdraw Description: The total number of sessions disconnected due to request for location substitution withdrawn was cancelled. Type: Counter	Int64
disc-reason-231	Name: sgsn-cancel-location-update Description: The total number of sessions disconnected because the location update was cancelled. Type: Counter	Int64
disc-reason-232	Name: sgsn-mnr-expiry Description: The total number of sessions disconnected due to manager expiry. Type: Counter	Int64
disc-reason-233	Name: sgsn-identity-failure Description: The total number of sessions disconnected due to identity check failure. Type: Counter	Int64
disc-reason-234	Name: sgsn-security-failure Description: The total number of sessions disconnected due to security verification failure. Type: Counter	Int64
disc-reason-235	Name: sgsn-auth-failure Description: The total number of sessions disconnected due to authentication failure. Type: Counter	Int64
disc-reason-236	Name: sgsn-glu-failure Description: The total number of sessions disconnected due to Global Location Update (GLU) failure. Type: Counter	Int64
disc-reason-237	Name: sgsn-implicit-detach Description: The total number of sessions disconnected due to an implicit detach. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-238	Name: sgsn-subscriber-moved-to-different-smgr-instance Description: The total number of sessions disconnected due to subscriber moving to a different SMGR instance. Type: Counter	Int64
disc-reason-239	Name: sgsn-subscriber-moved-to-peer-sgsn Description: The total number of sessions disconnected due to subscriber moving to a peer SGSN. Type: Counter	Int64
disc-reason-240	Name: sgsn-dns-failure-inter-rau Description: The total number of sessions disconnected due to DNS failure during Inter-RAU. Type: Counter	Int64
disc-reason-241	Name: sgsn-context-response-failure Description: The total number of sessions disconnected due to context response failure. Type: Counter	Int64
disc-reason-242	Name: sgsn-hlr-not-found-for-ims Description: The total number of sessions disconnected due to HLR not found for particular IMSI. Type: Counter	Int64
disc-reason-243	Name: sgsn-ms-init-detach Description: The total number of sessions disconnected due to MS initiated detach. Type: Counter	Int64
disc-reason-244	Name: sgsn-roaming-not-allowed Description: The total number of sessions disconnected because MS was not allowed to roam. Type: Counter	Int64
disc-reason-245	Name: sgsn-duplicate-context Description: The total number of sessions disconnected due to duplicate context. Type: Counter	Int64
disc-reason-246	Name: hss-profile-update-failed Description: The total number of sessions disconnected due to failure of HSS profile update. Type: Counter	Int64
disc-reason-247	Name: inactive-without-activating-any-pdp Description: The total number of sessions disconnected where session is inactive and no PDP context is activated from this session. Type: Counter	Int64
disc-reason-248	Name: asnpc-idle-mode-timeout Description: The total number of sessions disconnected due to configured idle mode timeout duration is exhausted for ASN paging controller in WiMAX network. Type: Counter	Int64
disc-reason-249	Name: asnpc-idle-mode-exit Description: The total number of sessions disconnected due to idle mode exit message for ASN paging controller in WiMAX network. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-250	Name: asnpc-idle-mode-entry-auth-failed Description: The total number of sessions disconnected due to authentication failure during idle mode entry for ASN paging controller in WiMAX network. Type: Counter	Int64
disc-reason-251	Name: asngw-invalid-qos-configuration Description: The total number of sessions disconnected due to invalid QoS configuration for subscriber in WiMAX network. Type: Counter	Int64
disc-reason-252	Name: sgsn-dsd-allgprswithdrawn Description: The total number of sessions disconnected due to receipt of Delete Subscriber Data (DSD) message including the IE “all GPRS subscriptions withdrawn”. Type: Counter	Int64
disc-reason-253	Name: r6-pmk-key-change-failure Description: The total number of sessions disconnected due to primary master key change failure on R6 interface in WiMAX network. Type: Counter	Int64
disc-reason-254	Name: sgsn-illegal-me Description: The total number of sessions disconnected because the ME was illegal. Type: Counter	Int64
disc-reason-255	Name: sess-termination-timeout Description: The total number of sessions disconnected due to failure monitored through BS monitor keep-alive probe. Type: Counter	Int64
disc-reason-256	Name: sgsn-sai-failure Description: The total number of sessions disconnected due to an SGSN Service Area Identity (SAI) attachment failure. Type: Counter	Int64
disc-reason-257	Name: sgsn-mc-removal Description: The total number of sessions disconnected due to an error in SGSN inbound SRNS (Serving Radio Network Subsystem) registration state. Type: Counter	Int64
disc-reason-258	Name: sgsn-rai-removal Description: The total number of sessions disconnected due to error in Update PDP Context Response message for direct tunnel functionality. Direct tunnel functionality at GGSN was expecting some fields which were not received in the Update PDP Context Response message. Hence, GGSN was not able to establish tunnel appropriately with SGSN or RNC. Type: Counter	Int64
disc-reason-259	Name: sgsn-init-deact Description: The total number of sessions disconnected at SGSN due to unknown PDP context. Type: Counter	Int64
disc-reason-260	Name: ggsn-init-deact Description: The total number of sessions disconnected at SGSN due to PDP authentication failed. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-261	Name: hlr-init-deact Description: The total number of sessions disconnected at SGSN due to duplicate PDP context Type: Counter	Int64
disc-reason-262	Name: ms-init-deact Description: The total number of sessions disconnected at SGSN due to no response from GGSN. Type: Counter	Int64
disc-reason-263	Name: sgsn-detach-init-deact Description: The total number of sessions disconnected at SGSN due to failed response from GGSN. Type: Counter	Int64
disc-reason-264	Name: sgsn-rab-rel-init-deact Description: The total number of sessions disconnected at SGSN due to unknown APN. Type: Counter	Int64
disc-reason-265	Name: sgsn-iu-rel-init-deact Description: The total number of sessions disconnected at SGSN due to service request initiated deactivation. Type: Counter	Int64
disc-reason-266	Name: sgsn-gtpu-path-failure Description: The total number of sessions disconnected at SGSN due to attachment procedure initiated abort. Type: Counter	Int64
disc-reason-267	Name: sgsn-gtpc-path-failure Description: The total number of sessions disconnected at SGSN due to ISRAU initiated abort procedure. Type: Counter	Int64
disc-reason-268	Name: sgsn-local-handoff-init-deact Description: The total number of sessions disconnected at SGSN due to unknown APN. Type: Counter	Int64
disc-reason-269	Name: sgsn-remote-handoff-init-deact Description: The total number of sessions disconnected at SGSN due to MM context cleanup initiated abort procedure. Type: Counter	Int64
disc-reason-270	Name: sgsn-gtp-no-resource Description: The total number of sessions disconnected at SGSN due to unknown abort procedure. Type: Counter	Int64
disc-reason-271	Name: sgsn-mc-no-resource Description: The total number of sessions disconnected at SGSN due to abort procedure started by guard timeout. Type: Counter	Int64
disc-reason-272	Name: sgsn-odb-init-deact Description: The total number of sessions disconnected at SGSN due to abort procedure initiated on DHCP IP validate request. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-273	Name: sgsn-invalid-ti Description: The total number of sessions disconnected due to id mismatch in MIPv6 session. Type: Counter	Int64
disc-reason-274	Name: sgsn-actv-rejected-due-to-rnc Description: The total number of sessions disconnected as AAA session id not-found Type: Counter	Int64
disc-reason-275	Name: sgsn-apn-restrict-vio Description: The total number of sessions disconnected due to security associate rekeying failure. Type: Counter	Int64
disc-reason-276	Name: sgsn-actv-rejected-by-sgsn Description: The total number of sessions disconnected due to failure in relocation in ASN-PC service. Type: Counter	Int64
disc-reason-277	Name: sgsn-abnormal-deact Description: The total number of sessions disconnected due to failure in paging controller relocation in ASN-PC service. Type: Counter	Int64
disc-reason-278	Name: sgsn-actv-rejected-by-ggsn Description: The total number of sessions disconnected due to mismatch in authentication policy. Type: Counter	Int64
disc-reason-279	Name: sgsn-err-ind Description: The total number of sessions disconnected as DELETE MS ENTRY message received by the ASN Paging Controller. Type: Counter	Int64
disc-reason-280	Name: asngw-non-anchor-prohibited Description: The total number of sessions disconnected due to non-anchor ASN-GW being prohibited. Type: Counter	Int64
disc-reason-281	Name: asngw-im-entry-prohibited Description: The total number of sessions disconnected due to unknown reason. Type: Counter	Int64
disc-reason-282	Name: Session-idle-mode-entry-timeout Description: The total number of sessions disconnected Administratively. Type: Counter	Int64
disc-reason-283	Name: session-idle-mode-exit-timeout Description: The total number of sessions disconnected by remote system Type: Counter	Int64
disc-reason-284	Name: asnpc-ms-power-down-nwexit Description: The total number of sessions disconnected by local system. Type: Counter	Int64
disc-reason-285	Name: asnpc-r4-nwexit-recd Description: The total number of sessions disconnected due to non-availability of resources. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-286	Name: sgsn-iu-rel-before-call-est Description: The total number of sessions disconnected due to exceed in service limit. Type: Counter	Int64
disc-reason-287	Name: ikev2-subscriber-ipsecmgr-death Description: The total number of sessions disconnected due to LCP negotiation failed. Type: Counter	Int64
disc-reason-288	Name: All-dynamic-pool-addr-occupied Description: The total number of sessions disconnected due to no response in PPP-LCP session. Type: Counter	Int64
disc-reason-289	Name: mipv6ha-ip-addr-not-available Description: The total number of sessions disconnected due to loop back detected in PPP-LCP. Type: Counter	Int64
disc-reason-290	Name: bs-monitor-keep-alive-failed Description: The total number of sessions disconnected due to maximum retries in PPP-LCP session. Type: Counter	Int64
disc-reason-291	Name: sgsn-attach-in-reg-state Description: The total number of SGSN sessions disconnected due to an error in the SGSN attachment during the registration state. Type: Counter	Int64
disc-reason-292	Name: sgsn-inbound-srms-in-reg-state Description: The total number of SGSN sessions disconnected due to an error in the SGSN inbound SRNS in a registration state. Type: Counter	Int64
disc-reason-293	Name: dt-ggsn-tun-reestablish-failed Description: The total number of SGSN sessions disconnected due to error in Update PDP Context Response message for direct tunnel functionality. Direct tunnel functionality at GGSN was expecting some fields which were not received in the Update PDP Context Response message. Hence, the GGSN was not able to establish a tunnel appropriately with the SGSN or the RNC. Type: Counter	Int64
disc-reason-294	Name: sgsn-pdp-unknown Description: The total number of SGSN sessions disconnected due to an unknown PDP context. Type: Counter	Int64
disc-reason-295	Name: sgsn-pdp-auth-failure Description: The total number of SGSN sessions disconnected because the PDP authentication failed. Type: Counter	Int64
disc-reason-296	Name: sgsn-duplicate-pdp-context Description: The total number of SGSN sessions disconnected because the PDP authentication failed. Type: Counter	Int64
disc-reason-297	Name: sgsn-no-rsp-from-ggsn Description: The total number of SGSN sessions disconnected because the SGSN does not receive a response from the GGSN. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-298	Name: sgsn-failure-rsp-from-ggsn Description: The total number of SGSN sessions disconnected due to failed response from the GGSN. Type: Counter	Int64
disc-reason-299	Name: sgsn-apn-unknown Description: The total number of SGSN sessions disconnected due to an unknown APN. Type: Counter	Int64
disc-reason-300	Name: sgsn-pdp-status-mismatch Description: The total number of SGSN sessions disconnected due to deactivation initiated by a service request. Type: Counter	Int64
disc-reason-301	Name: sgsn-attach-on-attach-init-abort Description: The total number of SGSN sessions disconnected due to an attachment procedure-initiated abort. Type: Counter	Int64
disc-reason-302	Name: sgsn-iu-rel-in-israu-init-abort Description: The total number of SGSN sessions disconnected due to an aborted Inter-SGSN Routing Area Update (ISRAU) procedure. Type: Counter	Int64
disc-reason-303	Name: sgsn-smgr-init-ab Description: The total number of SGSN sessions disconnected because the SessMgr initiates an abort. Type: Counter	Int64
disc-reason-304	Name: sgsn-mm-ctx-cleanup-init-abort Description: The total number of SGSN sessions disconnected due to the MM context cleanup-initiated abort procedure. Type: Counter	Int64
disc-reason-305	Name: sgsn-unknown-abort Description: The total number of SGSN sessions disconnected due to an unknown abort procedure. Type: Counter	Int64
disc-reason-306	Name: sgsn-guard-timeout-abort Description: The total number of SGSN sessions disconnected because the abort procedure was started by the guard timer timeout. Type: Counter	Int64
disc-reason-307	Name: vpn-bounce-dhcpip-validate-req Description: The total number of SGSN sessions disconnected because the abort procedure was initiated upon receiving a DHCP IP validate request. Type: Counter	Int64
disc-reason-308	Name: mipv6-id-mismatch Description: The total number of sessions disconnected due to id mismatch in MIPv6 session. Type: Counter	Int64
disc-reason-309	Name: aaa-session-id-not-found Description: The total number of sessions disconnected as AAA session id not-found Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-310	Name: x1/x5-max-retry-reach Description: The total number of sessions disconnected due to security associate rekeying failure. Type: Counter	Int64
disc-reason-311	Name: x1-nwexit-recd Description: The total number of sessions disconnected due to failure in relocation in ASN-PC service. Type: Counter	Int64
disc-reason-312	Name: x1-dereg-req-recd Description: The total number of sessions disconnected due to failure in paging controller relocation in ASN PC service. Type: Counter	Int64
disc-reason-313	Name: x1-remote-failure Description: The total number of sessions disconnected due to mismatch in authentication policy. Type: Counter	Int64
disc-reason-314	Name: x1x2-protocol-errors Description: The total number of sessions disconnected as DELETE MSENTRY message received by the ASN Paging Controller. Type: Counter	Int64
disc-reason-315	Name: x2/x6-max-retry-reached Description: The total number of sessions disconnected because the ASNGW TID entry was not found. Type: Counter	Int64
disc-reason-316	Name: x2/x6-nwexit-recd Description: The total number of sessions disconnected due to network exit message received on X2 interface in PHS network. Type: Counter	Int64
disc-reason-317	Name: x2-dereg-req-recd Description: The total number of sessions disconnected due to deregistration request received on X2 interface in PHS network. Type: Counter	Int64
disc-reason-318	Name: x2-remote-failure Description: The total number of sessions disconnected by remote system due to failure on X2 interface in PHS network. Type: Counter	Int64
disc-reason-319	Name: x1-pmk-key-change-failure Description: The total number of sessions disconnected due to primary master key change failure on X1 interface in PHS network. Type: Counter	Int64
disc-reason-320	Name: SA-Rekeying-Failure Description: The total number of sessions disconnected because of an IKE SA rekeying failure. Type: Counter	Int64
disc-reason-321	Name: Sess-sleep-mode-entry-timeout Description: The total number of sessions disconnected due to session sleep mode entry timeout on PHS GW. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-322	Name: phsgw-non-anchor-prohibited Description: The total number of sessions disconnected due to non-anchor PHS GW being prohibited. Type: Counter	Int64
disc-reason-323	Name: asnpc-pc-relocation-failed Description: The total number of sessions disconnected due to failure in paging controller relocation in ASN PC service. Type: Counter	Int64
disc-reason-324	Name: asnpc-pc-relocation Description: The total number of sessions disconnected due to paging controller relocation in ASN PC service. Type: Counter	Int64
disc-reason-325	Name: auth_policy_mismatch Description: The total number of sessions disconnected due to authorization policy mismatch. Type: Counter	Int64
disc-reason-326	Name: ike/ipsec-sa-lifetime-expired Description: The total number of sessions disconnected due to IKE/IPsec security associate lifetime timer expiration. Type: Counter	Int64
disc-reason-327	Name: asnpc-del-ms-entry-recd Description: The total number of sessions disconnected as DELETE MS ENTRY message received by the ASN Paging Controller. Type: Counter	Int64
disc-reason-328	Name: phspc-sleep-mode-timeout Description: The total number of sessions disconnected due to sleep mode timeout by the PHS Paging Controller. Type: Counter	Int64
disc-reason-329	Name: phspc-sleep-mode-exit Description: The total number of sessions disconnected due to sleep mode exit by the PHS Paging Controller. Type: Counter	Int64
disc-reason-330	Name: phspc-sleep-mode-entry-auth-failed Description: The total number of sessions disconnected due to failed sleep mode entry authorization by the PHS Paging Controller. Type: Counter	Int64
disc-reason-331	Name: phspc-ms-power-down-nwexit Description: The total number of sessions disconnected due to ms power down network exit message received by the PHS Paging Controller. Type: Counter	Int64
disc-reason-332	Name: phspc-x6-nwexit-recd Description: The total number of PHS Paging Controller sessions disconnected due to network exit message received from X2 interface in PHS network. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-333	Name: invalid-nat-config Description: The total number of sessions disconnected due to the following reasons: 1. When SessMgr and ACSMgr are running in non-optimized mode. 2. When an undefined NAT pool is configured for subscriber. NAT must be disabled if ACS is not running in optimized mode. Type: Counter	Int64
disc-reason-334	Name: asngw-tid-entry-not-found Description: The total number of sessions disconnected because the ASNGW TID entry was not found. Type: Counter	Int64
disc-reason-335	Name: No-NAT-IP-Addr-for-subscriber Description: The total number of sessions disconnected due to NAT IP address being unavailable during call setup for allocation to a subscriber. Type: Counter	Int64
disc-reason-336	Name: excessive-phs-pd-flows-configured Description: The total number of sessions disconnected due to configuration of excessive PHS pd flows. Type: Counter	Int64
disc-reason-337	Name: phsgw-invalid-qos-configuration Description: The total number of sessions disconnected due to invalid QoS configuration for subscriber in PHS network. Type: Counter	Int64
disc-reason-338	Name: Interim-Update Description: The total number of sessions disconnected due to Interim Update. Type: Counter	Int64
disc-reason-339	Name: sgsn-inbound-attach-abort-radio-status-bad-lost Description: The total number of SGSN sessions disconnected because the inbound attach requests aborted due to poor radio status or lost radio connections. Type: Counter	Int64
disc-reason-340	Name: sgsn-inbound-irau-abort-radio-status-bad-lost Description: The total number of SGSN sessions disconnected due to inbound IRAU requests aborting as the radio status was poor or the radio connection lost. Type: Counter	Int64
disc-reason-341	Name: ike-keep-alive-failed Description: The total number of sessions disconnected due to IKE keepalive failure. Type: Counter	Int64
disc-reason-342	Name: sgsn-attach-abort-ms-suspend Description: The total number of SGSN sessions disconnected due to attach requests aborting because MS was in suspend mode. Type: Counter	Int64
disc-reason-343	Name: sgsn-inbound-irau-abort-ms-suspend Description: The total number of SGSN sessions disconnected due to IRAU requests aborted when MS was in suspend mode. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-344	Name: duplicate-session-detected Description: The total number of sessions disconnected due to detection of duplicate sessions for the same session id. Type: Counter	Int64
disc-reason-345	Name: sgsn-xid-response-failure Description: The total number of SGSN sessions disconnected due to XID response failure. Type: Counter	Int64
disc-reason-346	Name: sgsn-nse-cleanup Description: The total number of SGSN sessions disconnected due to record cleanup or reset on the network service entity (NSE). Type: Counter	Int64
disc-reason-347	Name: sgsn-gtp-req-failure Description: The total number of SGSN sessions disconnected due to failure of the GTPP request. Type: Counter	Int64
disc-reason-348	Name: sgsn-imsi-mismatch Description: The total number of SGSN sessions disconnected due to mismatches of the IMSIs. Type: Counter	Int64
disc-reason-349	Name: sgsn-bvc-blocked Description: The total number of SGSN sessions disconnected because the BSSGP Virtual Connection (BVC) was blocked. Type: Counter	Int64
disc-reason-350	Name: sgsn-attach-on-inbound-irau Description: The total number of SGSN sessions disconnected as the session was attached on inbound IRAU requests. Type: Counter	Int64
disc-reason-351	Name: sgsn-attach-on-outbound-irau Description: The total number of SGSN sessions disconnected while the session was attached on outbound IRAU requests. Type: Counter	Int64
disc-reason-352	Name: sgsn-incorrect-state Description: The total number of SGSN sessions disconnected due to incorrect state of network elements. Type: Counter	Int64
disc-reason-353	Name: sgsn-t3350-expiry Description: The total number of SGSN sessions disconnected due to expiry of the T-3350 timer. Type: Counter	Int64
disc-reason-354	Name: sgsn-page-timer-expiry Description: The total number of SGSN sessions disconnected due to expiry of the paging timer. Type: Counter	Int64
disc-reason-355	Name: phsgw-tid-entry-not-found Description: The total number of SGSN sessions disconnected due to local purging of PDP contexts. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-356	Name: phspc-del-ms-entry-recd Description: The total number of sessions disconnected as DELETE MS ENTRY message received by the PHS Paging Controller. Type: Counter	Int64
disc-reason-357	Name: sgsn-pdp-local-purge Description: The total number of SGSN sessions disconnected due to local purging of PDP contexts. The field indicator number will vary depending upon the build of the software. Type: Counter	Int64
disc-reason-358	Name: phs-invalid-nai Description: The total number of sessions disconnected due to invalid NAI in PHS network. Type: Counter	Int64
disc-reason-359	Name: Session-sleep-mode-exit-timeout Description: The total number of sessions disconnected due to sleep mode exit timeout for PHS paging controller in PHS network. Type: Counter	Int64
disc-reason-360	Name: sgsn-offload-phase2 Description: With Iu/Gb flex enabled, this is the total number of SGSN sessions disconnected when the subscriber has been forcefully cleared via phase2 offloading from one SGSN to another SGSN within the SGSN pool. Type: Counter	Int64
disc-reason-361	Name: phs-thirdparty-auth-fail Description: The total number of sessions disconnected due to third party authorization failure in PHS network. Type: Counter	Int64
disc-reason-362	Name: Remote-error-notification Description: The total number of sessions disconnected due to remote error notifications. Type: Counter	Int64
disc-reason-363	Name: No-response Description: The total number of sessions disconnected due to no response from any of the network entity. Type: Counter	Int64
disc-reason-364	Name: PDG-Auth-failed Description: The total number of sessions disconnected due re-authorization failure at any stage. Type: Counter	Int64
disc-reason-365	Name: mme-s1AP-send-failed Description: The total number of sessions disconnected because of a MME and s1AP send failure. Type: Counter	Int64
disc-reason-366	Name: mme-egtpc-connection-failed Description: The total number of sessions disconnected because of a MME-eGTPC connection failure. Type: Counter	Int64
disc-reason-367	Name: mme-egtpc-create-session-failed Description: The total number of sessions disconnected because of the MME-eGTPC create session failed. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-368	Name: mme-authentication-failure Description: The total number of sessions disconnected because of a MME authentication failure. Type: Counter	Int64
disc-reason-369	Name: mme-ue-detach Description: The total number of sessions disconnected because of MME and UE detach. Type: Counter	Int64
disc-reason-370	Name: mme-mme-detach Description: The total number of sessions disconnected because of MME to MME detach. Type: Counter	Int64
disc-reason-371	Name: mme-hss-detach Description: The total number of sessions disconnected because of a MME HSS detach. Type: Counter	Int64
disc-reason-372	Name: mme-pgw-detach Description: The total number of sessions disconnected because of a MME and P-GW detach. Type: Counter	Int64
disc-reason-373	Name: mme-sub-validation-failure Description: The total number of sessions disconnected because of a MME sub validation failure. Type: Counter	Int64
disc-reason-374	Name: mme-hss-connection-failure Description: The total number of sessions disconnected because of a MME HSS connection failure. Type: Counter	Int64
disc-reason-375	Name: mme-hss-user-unknown Description: The total number of sessions disconnected because the MME HSS user is unknown. Type: Counter	Int64
disc-reason-376	Name: dhcp-lease-mismatch-detected Description: The total number of sessions disconnected due to mismatch in DHCP lease time mismatch. Type: Counter	Int64
disc-reason-377	Name: nemo-link-layer-down Description: The total number of disconnected sessions due to the NEMO (Network Mobility) link layer being down. Type: Counter	Int64
disc-reason-378	Name: eapol-max-retry-reached Description: The total number of sessions disconnected because of eapol-max-retry-reached. Type: Counter	Int64
disc-reason-379	Name: sgsn-offload-phase3 Description: With Iu/Gb flex enabled, this is the total number of SGSN sessions disconnected when the subscriber has been forcefully cleared via phase3 offloading from one SGSN to another SGSN within the SGSN pool. Type: Counter	Int64
disc-reason-380	Name: mbms-bearer-service-disconnect Description: The total number of sessions disconnected due to disconnect in MBMS bearer service. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-381	Name: disconnect-on-violation-odb Description: The total number of sessions disconnected due to violation on Operator Determined Barring (ODB) of services. Type: Counter	Int64
disc-reason-382	Name: disconn-on-violation-focs-odb Description: The total number of sessions disconnected due to violation on Operator Determined Barring (ODB) of Free-of-Charge service (FOCS). Type: Counter	Int64
disc-reason-383	Name: CSCF-REG-Admin-disconnect Description: The total number of CSCF sessions disconnected through CLI registration clearing by administrator. Type: Counter	Int64
disc-reason-384	Name: CSCF-REG-User-disconnect Description: The total number of CSCF sessions disconnected by UE with an explicit deregister message. Type: Counter	Int64
disc-reason-385	Name: CSCF-REG-Lifetime-Expiry Supported in releases prior to 14.0. Description: The total number of CSCF sessions disconnected due to registration expiry. Type: Counter	Int64
disc-reason-386	Name: CSCF-REG-Network-disconnect Description: The total number of CSCF sessions disconnected due to network-initiated deregistration. Type: Counter	Int64
disc-reason-387	Name: CSCF-Call-Admin-disconnect Description: The total number of CSCF sessions disconnected through CLI call clearing by administrator. Type: Counter	Int64
disc-reason-388	Name: CSCF-Call-User-disconnect Description: The total number of CSCF sessions disconnected by UE using BYE message. Type: Counter	Int64
disc-reason-389	Name: CSCF-CALL-Local-disconnect Description: The total number of CSCF sessions disconnected locally due to some processing failure, task death, recovery failure, etc. Type: Counter	Int64
disc-reason-390	Name: CSCF-CALL-No-Resource Description: The total number of CSCF sessions disconnected because locally due to congestion caused by max callline/flow usage from high cpu/memory utilization in sessmgr. Type: Counter	Int64
disc-reason-391	Name: CSCF-CALL-No-Response Description: The total number of CSCF sessions disconnected due to response timeout (SIP response code 408). Type: Counter	Int64
disc-reason-392	Name: CSCF-CALL-Inactivity-timeout Description: The total number of CSCF sessions disconnected due to session timer timeout. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-393	Name: CSCF-CALL-Media-Auth-Failure Description: The total number of CSCF sessions disconnected due to media authorization failure. Type: Counter	Int64
disc-reason-394	Name: CSCF-REG-No-Resource Description: The total number of CSCF sessions disconnected because register message is rejected due to congestion caused by max calline/flow usage from high cpu/memory utilization in sessmgr. Type: Counter	Int64
disc-reason-395	Name: ms-unexpected-idle-mode-entry Description: The total number of disconnects due to ms-unexpected-idle-mode-entry. Type: Counter	Int64
disc-reason-396	Name: Re-Auth-failed Description: The total number of disconnects due to Re-Auth-failed. Type: Counter	Int64
disc-reason-397	Name: sgsn-pdp-nse-cleanup Description: The total number of SGSN sessions disconnected because the NSE configured in the GPRS service is removed and there are PDP contexts associated with the subscribers attached in this NSE. Type: Counter	Int64
disc-reason-398	Name: sgsn-mm-ctxt-gtp-no-resource Description: The total number of SGSN sessions disconnected because an SGTP service could not be assigned to an MM context. The field indicator number will vary depending upon the build of the software Type: Counter	Int64
disc-reason-399	Name: unknown-apn Description: The total number of disconnects due to an unknown Access Point Name (APN). Type: Counter	Int64
disc-reason-400	Name: gtpc-path-failure Description: The total number of disconnects due to a GTPC path failure. Type: Counter	Int64
disc-reason-401	Name: gtpu-path-failure Description: The total number of disconnects due to a GTPU path failure. Type: Counter	Int64
disc-reason-402	Name: actv-rejected-by-ggsn Description: The total number of disconnects due to activation being rejected by GGSN. Type: Counter	Int64
disc-reason-403	Name: sgsn-pdp-gprs-camel-release Description: The total number of PDP activation failures due to release from CAMEL. Type: Counter	Int64
disc-reason-404	Name: sgsn-check-imei-failure Description: The total number of Attaches/RAUs rejected due to failure in the IMEI checking (due either to black listing or to grey listing and an SGSN operator policy is configured with deny-grey-list). Type: Counter This counter is available in releases 9.0 and higher.	Int64

Reason No.	Description	Data Type
disc-reason-405	Name: sgsn-sndcp-init-deact Description: The total number of PDP contexts deactivated upon receiving a cleanup indication from the SNDSCP (Sub Network Dependent Convergence Protocol) layer. Type: Counter	Int64
disc-reason-406	Name: sgsn-pdp-inactivity-timeout Description: The total number of subscribers detached or PDP context(s) deactivated due to subscriber inactivity during a configured (in the SGSN operator policy) time. Type: Counter	Int64
disc-reason-407	Name: fw-and-nat-policy-removed Description: The total number of NAT-enabled sessions dropped due to Firewall-and-NAT policy updates in mid session. Type: Counter	Int64
disc-reason-408	Name: FNG-Auth-failed Description: The total number of FNG sessions disconnected due to authorization failures based on mismatched Femtocell Access Point (FAP) credentials. Type: Counter	Int64
disc-reason-409	Name: ha-stale-key-disconnect Description: The total number of disconnects due to an ha-stale-key. Type: Counter	Int64
disc-reason-410	Name: No-IPV6-address-for-subscriber Description: The total number of disconnects because there was no IPv6 address for the subscriber. Type: Counter	Int64
disc-reason-411	Name: prefix-registration-failure Description: The total number of disconnects due to a prefix registration failure. Type: Counter	Int64
disc-reason-412	Name: disconnect-from-policy-server Description: the total number of disconnects initiated from a policy server. Type: Counter	Int64
disc-reason-413	Name: s6b-auth-failed Description: The total number of subscriber sessions disconnected due to failure of authentication over S6b interface with HSS. This support is added for interoperability of GGSN with P-GW and HA. Type: Counter	Int64
disc-reason-414	Name: gtpc-err-ind Description: The total number of sessions disconnected due to a GTP control plane error indication message. Type: Counter	Int64
disc-reason-415	Name: gtpu-err-ind Description: The total number of sessions disconnected due to a GTP user plane error indication message. Type: Counter	Int64
disc-reason-416	Name: invalid-pdn-type Description: The total number of sessions disconnected due to an invalid PDN-type error. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-417	Name: aaa-auth-req-failed Description: The total number of subscriber sessions disconnected due to a AAA authentication request failure. Type: Counter	Int64
disc-reason-418	Name: apn-denied-no-subscription Description: The total number of subscriber sessions disconnected due to denial of APN as requested APN was not subscribed to subscriber. Type: Counter	Int64
disc-reason-419	Name: Sgw-context-replacement Description: The total number of sessions disconnected due to an S-GW context replacement. Type: Counter	Int64
disc-reason-420	Name: dup-static-ip-addr-req Description: The total number of subscriber sessions disconnected due to new session request received with duplicate IP address at GGSN. This support is added for interoperability of GGSN with P-GW and HA. Type: Counter	Int64
disc-reason-421	Name: apn-restrict-violation Description: The total number of subscriber sessions disconnected due to violation of level of restriction to ensure controlled co-existence of the Primary PDP Contexts in APN. Type: Counter	Int64
disc-reason-422	Name: invalid-wapn Description: The total number of sessions disconnected due to invalid or no W-APN details received from the UE. Type: Counter	Int64
disc-reason-423	Name: ttg-nsapi-allocation-failed Description: The total number of TTG sessions disconnected due to an NSAPI (Network Service Access Point Identifier) allocation failure. Type: Counter	Int64
disc-reason-424	Name: mandatory-gtp-ie-missing Description: The total number of sessions disconnected due to the unavailability of a mandatory GTP Information-Element during PDP context creation. Type: Counter	Int64
disc-reason-425	Name: aaa-unreachable Description: The total number of disconnected sessions due to RADIUS server not being reachable. For mobile-IP calls, aaa-unreachable cause code is set when re-authentication failure happens. RADIUS generates this only for a mobile IP call and RADIUS server is down during authentication. Type: Counter	Int64
disc-reason-426	Name: asngw-service-flow-deletion Description: The total number of disconnects resulting from flow deletion by ANS-GW. Type: Counter	Int64
disc-reason-427	Name: CT-PMIP-RRQ-NVSE-Value-Change Description: The total number of disconnects resulting from a PMIP (Proxy-MIP) registration request (RRQ) returning an NVSE (Normal/Vendor organization Special Extension) value change [WiMAX]. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-428	Name: tcp-read-failed Description: The total number of disconnected sessions due to a TCP read failure. Type: Counter	Int64
disc-reason-429	Name: tcp-write-failed Description: The total number of disconnected sessions due to a TCP write failure. Type: Counter	Int64
disc-reason-430	Name: ssl-handshake-failed Description: The total number of disconnected Secure Sockets Layer (SSL) sessions due to a handshake failure. Type: Counter	Int64
disc-reason-431	Name: ssl-renegotiate-failed Description: The total number of disconnected SSL sessions due to a renegotiation failure. Type: Counter	Int64
disc-reason-432	Name: ssl-bad-message Description: The total number of disconnected SSL sessions due to corrupted messages. Type: Counter	Int64
disc-reason-433	Name: ssl-alert-received Description: The total number of disconnected SSL sessions due to an alert. Type: Counter	Int64
disc-reason-434	Name: ssl-disconnect Description: The total number of SSL disconnections. Type: Counter	Int64
disc-reason-435	Name: ssl-migration Description: The total number of SSL migrations. Type: Counter	Int64
disc-reason-436	Name: sgsn-ard-failure Description: The total number of session disconnects due to ARD (access restriction data) subscription restriction received from the HLR. Type: Counter	Int64
disc-reason-437	Name: sgsn-camel-release Description: The total number of session disconnects experienced by the SGSN due to Detach/Attach Rejects due to explicit "Release GPRS" received from CAMEL component GSM-SCF or due to failures during CAMEL handling. Type: Counter	Int64
disc-reason-438	Name: sgsn-egtpc-connection-failed Replaced by disc-reason-439 in Release 14.0.	Int64
disc-reason-439	Name: sgsn-egtpc-create-session-failed Supported in Release 14. Type: Counter	Int64
disc-reason-440	Name: sgsn-hss-detach Replaced by disc-reason-230 in Release 14.0	Int64

Reason No.	Description	Data Type
disc-reason-441	Name: sgsn-hss-connection-failure Replaced by disc-reason-236 in Release 14.0.	Int64
disc-reason-442	Name: sgsn-pgw-detach Not yet supported.	Int64
disc-reason-443	Name: sgsn-s5-no-support-for-apn Supported in Release 14. Type: Counter	Int64
disc-reason-444	Name: sgsn-no-rab-for-gbr-bearer Not yet supported - in development for future use. Type: Counter	Int64
disc-reason-445	Name: sgsn-sgw-selection-failure Supported in Release 14.0. Description: The total number of session disconnects resulting from the S4-SGSN's inability to establish a PDP context in the following scenario: 1. Either EPS or GPRS subscription is used. 2. S4-SGSN chooses S4 interface for PDP activation because • The UE is EPC-capable. • EGTP service is configured. • Operator Policy does not override the core-nw-interface to Gn. 3. The SGSN successfully resolves P-GW address (S5/S8 address) for the APN requested. 4. The SGSN tries S-GW resolution. If the DNS response fails and no local S-GW is configured for the RAI, then the PDP activation is rejected with this disconnect reason. Type: Counter	Int64
disc-reason-446	Name: sgsn-pgw-selection-failure Supported in Release 14.0. Description: The total number of disconnects by the S4-enabled SGSN due to P-GW DNS failure for any cause other than the DNS response does not contain an S5/S8 address. Type: Counter	Int64
disc-reason-447	Name: wimax-hotlining-status-change Description: The total number of disconnects resulting from a status change in the Hotlining-Capabilities sub-attribute in the WiMAX-Capabilities attribute. Type: Counter	Int64
disc-reason-448	Name: ggsn-no-rsp-from-sgsn Description: The total number of sessions disconnected on GGSN node due to no response received from SGSN for a request. Type: Counter	Int64
disc-reason-453	Name: mipha-dup-wimax-session Description: The total number of WiMAX session disconnects resulting from duplicate Mobile IP Home Agent (MIPHA) logins. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-454	Name: invalid-version-attr Description: This disconnect reason is set, if there is mismatch of WiMAX-Release version supported by ASNGW and that supported by AAA. Triggers: Mismatch of WiMAX-Release version supported by ASNGW and that supported by AAA. AAA sends WiMAX release in Radius packet. Availability: This total is cumulative for all ASNGW services configured on the system. Type: Counter	Int64
disc-reason-455	Name: sgsn-zone-code-failure Description: The total number of session disconnects experienced by the SGSN due to verification failure during the zone-code checking procedure. Type: Counter	Int64
disc-reason-456	Name: invalid-qci Description: The total number of session disconnects resulting from the receipt of invalid QoS class identifiers (QCIs). This error is returned if an invalid QCI is used in certain operations such as create bearer, which expects a QCI. A QCI is deemed invalid if it is not a standard QCI (1-9) or the QCI is not defined in the QCI table associated with the service. Type: Counter	Int64
disc-reason-458	Name: sgsn-mnc-no-dual-pdp-init-pdp-deact Type: Counter	Int64
disc-reason-459	Name: mme-init-ctxt-setup-failure Description: The total number of session disconnects resulting from context setup failures in the ENodeB during EMM/ECM procedures. Type: Counter	Int64
disc-reason-460	Name: mme-driver-initiated Description: The total number of session disconnects resulting from the default value for mme-sessions. Type: Counter	Int64
disc-reason-461	Name: mme-s1ap-connection-down Description: The total number of session disconnects resulting from S1 AP connection failures. Type: Counter	Int64
disc-reason-462	Name: mme-s1ap-reset-recd Description: The total number of session disconnects resulting from partial or full resets received for the S1 connection. Type: Counter	Int64
disc-reason-463	Name: mme-s6a-response-timeout Description: The total number of session disconnects resulting from requests to the HSS that timed out (AIR or ULR). Type: Counter	Int64
disc-reason-464	Name: mme-s13-response-timeout Description: The total number of session disconnects resulting from EIR query time outs. Type: Counter	Int64
disc-reason-465	Name: mme-Illegal-equipment Description: The total number of session disconnects resulting from EIR query failures. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-466	Name: mme-unexpected-attach Description: The total number of session disconnects resulting from older sessions getting disconnected due to the UE executing an ATTACH procedure. Type: Counter	Int64
disc-reason-467	Name: mme-sgw-selection-failure Description: The total number of session disconnects resulting from failed selections of S-GWs for the UE's current location. Type: Counter	Int64
disc-reason-468	Name: mme-pgw-selection-failure Description: The total number of session disconnects resulting from failed selections of P-GWs for default APNs. Type: Counter	Int64
disc-reason-469	Name: mme-reselection-to-sgsn Description: The total number of session disconnects resulting from a context request from an SGSN relocated call to 3G. Type: Counter	Int64
disc-reason-470	Name: mme-relocation-to-sgsn Description: The total number of session disconnects resulting from calls transitioned to an SGSN using handover signaling. Type: Counter	Int64
disc-reason-471	Name: mme-reselection-to-mme Description: The total number of session disconnects resulting from a context request from an MME relocated call to a different MME. Type: Counter	Int64
disc-reason-472	Name: mme-relocation-to-mme Description: The total number of session disconnects resulting from calls transitioned to an MME using handover signaling. Type: Counter	Int64
disc-reason-473	Name: mme-tau-attach-collision Description: The total number of session disconnects resulting from processing a TAU request with a foreign GUTI that cleared an existing session on the MME. Type: Counter	Int64
disc-reason-474	Name: mme-old-sgsn-resolution-failure Description: The total number of session disconnects resulting from calls setup using a PTMSI that failed due to failure in resolution of the old SGSN context. Type: Counter	Int64
disc-reason-475	Name: mme-old-mme-resolution-failure Description: The total number of session disconnects resulting from calls setup using a foreign GUTI that failed due to a failure in resolution of the old MME context. Type: Counter	Int64
disc-reason-476	Name: mme-reloc-ho-notify-timeout Description: The total number of session disconnects resulting from a handover based session origination failure due to an ho-notify timeout. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-477	Name: mme-reloc-ho-req-ack-timeout Description: The total number of session disconnects resulting from a handover based session origination failure due to an ho-request-ack timeout. Type: Counter	Int64
disc-reason-478	Name: mme-create-session-timeout Description: The total number of session disconnects resulting from a create session request to the S-GW that timed out. Type: Counter	Int64
disc-reason-479	Name: mme-create-session-failure Description: The total number of session disconnects resulting from a create session request to the S-GW that returned a failure response. Type: Counter	Int64
disc-reason-480	Name: mme-s11-path-failure Description: The total number of session disconnects resulting from a call cleared due to an S11 path failure. Type: Counter	Int64
disc-reason-481	Name: mme-policy-no-ue-irat Description: The total number of session disconnects resulting from a call cleared due to policy restrictions on inter-RAT handovers. Type: Counter	Int64
disc-reason-482	Name: mme-x2-handover-failed Description: The total number of session disconnects resulting from a call cleared due to failures in x2 handovers. Type: Counter	Int64
disc-reason-483	Name: mme-attach-restrict Description: The total number of session disconnects resulting from an operator policy based attach restriction. Type: Counter	Int64
disc-reason-484	Name: mme-regional-zone-code Description: The total number of session disconnects resulting from the UE being in a zone code where the UE is not allowed to roam. Type: Counter	Int64
disc-reason-485	Name: mme-no-response-from-ue Description: The total number of session disconnects resulting from the maximum retransmission of a NAS message during session setup. Type: Counter	Int64
disc-reason-486	Name: mme-sgw-relocation-failed Description: The total number of session disconnects resulting from an S-GW relocation procedure failing. Type: Counter	Int64
disc-reason-487	Name: mme-implicit-detach Description: The total number of session disconnects resulting from the UE being implicitly detached due to inactivity. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-488	Name: sgsn-detach-notify Replaced by disc-reason-505 in Release 14.0.	Int64
disc-reason-489	In StarOS 12.1 and earlier releases. Name: policy-initiated-release Description: The total number of times that a call disconnect occurs due to a Gx-initiated bearer release. For example, this disconnect reason may be used if there are any errors in the manner of the policy or rule configurations. Type: Counter	Int64
disc-reason-490	In StarOS 12.1 and earlier releases. Name: gy-result-code-system-failure Description: The total number of sessions disconnected due to failure result codes received from the Online Charging Server that resulted in system failure on the GTP side. Type: Counter	Int64
disc-reason-491	In StarOS 12.1 and earlier releases. Name: emergency-inactivity-timeout Description: The total number of sessions disconnected due to emergency inactivity timeout. The emergency session inactivity timeout is set on an APN configured as an emergency APN for VoLTE-based E911 support. Type: Counter	Int64
disc-reason-492	Name: mme-zone-code-validation-failed Description: The total number of session disconnects resulting from the UE being in a zone code where the UE is not allowed to roam. Type: Counter	Int64
disc-reason-493	Name: sgsn-pgw-init-deact Supported in Release 14.0. Type: Counter	Int64
disc-reason-494	Name: s6b-ip-validation-failed Not supported in releases 12.0 or 12.2 - in development for future release. Type: Counter	Int64
disc-reason-495	Name: sgsn-failure-rsp-from-sgw Supported in Release 14.0. Type: Counter	Int64
disc-reason-496	Name: tcp-remote-close Description: The total number of sessions disconnected due to a TCP FIN (finished sending) message received from the UE. Type: Counter	Int64
disc-reason-497	Name: tcp-reset-received Description: The total number of sessions disconnected due to a TCP RST (reset) message received from the UE. Type: Counter	Int64
disc-reason-498	Name: tcp-socket-error Description: The total number of sessions disconnected due to a socket error received from the trek stack at the access-side TCP socket connection between the UE and the TTG. Type: Counter	Int64

Reason No.	Description	Data Type
disc-reason-500	Name: camel-invalid-configuration Supported in Release 14.0. Type: Counter	Int64
disc-reason-501	Name: 4Gto3G-context-replacement Type: Counter	Int64
disc-reason-502	Name: mme-isr-sgsn-init-detach Description: The total number of times an MME, with IRS enabled, deletes a subscriber to detach the UE after receiving an S3 Detach Notification from the SGSN with cause code “complete detach”. Type: Counter	Int64
disc-reason-503	Name: sgsn-isr-addl-ptmsi-rai Supported in Release 14.0. Type: Counter	Int64
disc-reason-504	Name: sgsn-sgw-dbr-cause-isr-deact Supported in Release 14.0. Type: Counter	Int64
disc-reason-505	Name: sgsn-isr-mme-init-detach Supported in Release 14.0. Type: Counter	Int64
disc-reason-506	Name: mme-sgw-dbr-cause-isr-deact Type: Counter	Int64
disc-reason-507	Name: sgsn-ptmsi-crunch Supported in Release 14.0. Type: Counter	Int64
disc-reason-508	Name: 3Gto4G-context-replacement Supported in Release 14.0 Type: Counter	Int64
disc-reason-509	Name: sgsn-actv-reject-on-dns-failure Never used. Removed in Release 14.0.	Int64
disc-reason-509	Name: mme-no-eps-bearers-activated Type: Counter	Int64
disc-reason-summary	Description: Contains all of the disconnect reason counters at once in following format: <code>code = count; code = count; ; code = count</code> all non-zero disconnect counters will be exported in a semi-colon separated format. If no disconnect statistics are available, the value of This statistic will be a zero-length string. Type: Information	String



Important: For information on statistics that are common to all schema see the *Statistics and Counters Overview* chapter.

Chapter 67

show aaa group name

Table 68. show aaa group name Command Output Descriptions

Field	Description
Group name	The AAA server group name.
Context	The context name.
Diameter config:	
Authentication:	
Dictionary	The Diameter dictionary used for authentication.
Endpoint name	The Diameter endpoint used for authentication.
Max-transmissions	The maximum number of transmission attempts for Diameter authentication.
Max-retries	The number of retry attempts for Diameter authentication requests.
Request-timeout	The Diameter authentication request timeout period.
Redirect-host-avp	Indicates whether to use just one returned AVP, or use the first returned AVP as selecting the primary host and the second returned AVP as selecting the secondary host.
Accounting:	
Dictionary	The Diameter dictionary used for accounting.
Endpoint name	The Diameter endpoint used for accounting.
Max-transmissions	The maximum number of transmission attempts for Diameter accounting.
Max-retries	The number of retry attempts for Diameter accounting requests.
Request-timeout	The Diameter accounting request timeout period.
Radius Config:	
Dictionary	The RADIUS dictionary.
Strip-domain	Indicates whether the domain is stripped from the user name prior to authentication or accounting.
Authenticator-validation	Indicates whether the MD5 authentication of RADIUS user is enabled.
Allow authentication-down	Indicates whether the system allows subscriber sessions when RADIUS authentication is unavailable.
Allow accounting-down	Indicates whether the system allows subscriber sessions when RADIUS accounting is unavailable.

Field	Description
Attributes:	
Nas-identifier	The attribute name by which the system is identified in Access-Request messages.
Nas-ip	The AAA interface IP address(es) used to identify the system.
Nas-ip backup	The IP address of the secondary interface to use in the current context.
Nexthop	The next hop IP address for this NAS IP address.
MPLS-label	Indicates the MPLS label used for traffic from the specified RADIUS client NAS IP address.
VRF	The Virtual Routing and Forwarding (VRF) Context instance associated with this AAA group.
Authentication	
called-station-id	Indicates whether RADIUS authentication attribute for called station id is enabled. The attribute must also be supported in the configured RADIUS dictionary.
calling-station-id	Indicates whether RADIUS authentication attribute for calling station id is enabled. The attribute must also be supported in the configured RADIUS dictionary.
imsi	Indicates whether RADIUS authentication attribute for IMSI is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-pdp-type	Indicates whether RADIUS authentication attribute for 3 GPP PDP type is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-cg-address	Indicates whether RADIUS authentication attribute for 3 GPP CG address is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-gprs-qos-negotiated-profile	Indicates whether RADIUS authentication attribute for 3 GPP GPRS QoS negotiated profile is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-sgsn-address	Indicates whether RADIUS authentication attribute for 3 GPP SGSN address is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-ggsn-address	Indicates whether RADIUS authentication attribute for 3 GPP GGSN address is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-imsi-mcc-mnc	Indicates whether RADIUS authentication attribute for 3 GPP IMSI MCC MNC is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-ggsn-mcc-mnc	Indicates whether RADIUS authentication attribute for 3 GPP GGSN MCC MNC is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-nsapi	Indicates whether RADIUS authentication attribute for 3 GPP NSAPI is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-select-mode	Indicates whether RADIUS authentication attribute for 3 GPP select mode is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-charging-characteristics	Indicates whether RADIUS authentication attribute for 3 GPP charging characteristics is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-sgsn-mcc-mnc	Indicates whether RADIUS authentication attribute for 3 GPP SGSN MCC MNC is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-imeisv	Indicates whether RADIUS authentication attribute for 3 GPP imeisv is enabled. The attribute must also be supported in the configured RADIUS dictionary.

Field	Description
3gpp-rat-type	Indicates whether RADIUS authentication attribute for 3GPP RAT type is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-user-location-info	Indicates whether RADIUS authentication attribute for 3GPP user location information is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-ms-timezone	Indicates whether RADIUS authentication attribute for 3GPP ms timezone is enabled. The attribute must also be supported in the configured RADIUS dictionary.
Accounting	
called-station-id	Indicates whether RADIUS accounting attribute for called station id is enabled. The attribute must also be supported in the configured RADIUS dictionary.
calling-station-id	Indicates whether RADIUS accounting attribute for calling station id is enabled. The attribute must also be supported in the configured RADIUS dictionary.
acct-input-octets	Indicates whether RADIUS accounting attribute for accounting input octets is enabled. The attribute must also be supported in the configured RADIUS dictionary.
acct-input-packets	Indicates whether RADIUS accounting attribute for accounting input packets is enabled. The attribute must also be supported in the configured RADIUS dictionary.
acct-session-time	Indicates whether RADIUS accounting attribute for accounting session time is enabled. The attribute must also be supported in the configured RADIUS dictionary.
acct-output-octets	Indicates whether RADIUS accounting attribute for accounting output octets is enabled. The attribute must also be supported in the configured RADIUS dictionary.
acct-output-packets	Indicates whether RADIUS accounting attribute for accounting output packets is enabled. The attribute must also be supported in the configured RADIUS dictionary.
event-timestamp	Indicates whether RADIUS accounting attribute for event timestamp is enabled. The attribute must also be supported in the configured RADIUS dictionary.
imsi	Indicates whether RADIUS accounting attribute for IMSI is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-charging-id	Indicates whether RADIUS accounting attribute for 3GPP charging ID is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-pdp-type	Indicates whether RADIUS accounting attribute for 3GPP PDP type is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-cg-address	Indicates whether RADIUS accounting attribute for 3GPP CG address is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-gprs-qos-negotiated-profile	Indicates whether RADIUS accounting attribute for 3GPP GPRS QoS negotiated profile is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-sgsn-address	Indicates whether RADIUS accounting attribute for 3GPP SGSN address is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-ggsn-address	Indicates whether RADIUS accounting attribute for 3GPP GGSN address is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-imsi-mcc-mnc	Indicates whether RADIUS accounting attribute for 3GPP IMSI MCC MNC is enabled. The attribute must also be supported in the configured RADIUS dictionary.

■ Common Syntax Options

Field	Description
3gpp-ggsn-mcc-mnc	Indicates whether RADIUS accounting attribute for 3GPP GGSN MCC MNC is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-nsapi	Indicates whether RADIUS accounting attribute for 3GPP NSAPI is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-select-mode	Indicates whether RADIUS accounting attribute for 3GPP select mode is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-charging-characteristics	Indicates whether RADIUS accounting attribute for 3GPP charging characteristics is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-sgsn-mcc-mnc	Indicates whether RADIUS accounting attribute for 3GPP SGSN MCC MNC is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-imei-sv	Indicates whether RADIUS accounting attribute for 3GPP imei-sv is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-rat-type	Indicates whether RADIUS accounting attribute for 3GPP RAT type is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-user-location-info	Indicates whether RADIUS accounting attribute for 3GPP user location information is enabled. The attribute must also be supported in the configured RADIUS dictionary.
3gpp-ms-timezone	Indicates whether RADIUS accounting attribute for 3GPP ms timezone is enabled. The attribute must also be supported in the configured RADIUS dictionary.
Authentication:	
Algorithm	The RADIUS authentication server selection algorithm for the current context.
Deadtime	The time period to wait before changing the state of a RADIUS server from “Down” to “Active”, in minutes.
Max-outstanding	The maximum number of messages a AAA manager will queue.
Max-retries	The maximum number of times communication with a AAA server is attempted before it is marked as “Not Responding” and the detect dead server’s consecutive failures count is incremented.
Max-transmissions	The maximum number of re-transmissions for RADIUS authentication requests.
Timeout	The time period to wait for a response from the RADIUS server before re-sending the messages, in seconds.
Apn-to-be-included	The APN name included for RADIUS authentication.
Authenticate null-username	Indicates whether authentication of user names that are blank or empty is enabled.
Probe:	
Interval	The time period between two RADIUS authentication probes.
Timeout	The timeout period for HAGR to wait for a response for RADIUS authentication probes.
Max-retries	The maximum number of retries for RADIUS authentication probe response.
Keepalive:	
Interval	The time period between two keepalive access requests.

Field	Description
Timeout	The time period between two keepalive access request retries.
Retries	The number of times the keepalive access request is sent before marking the server as unreachable.
consecutive-response	The number of consecutive authentication responses after which the server is marked as reachable.
Username	The user name used for authentication.
Calling-station-id	The calling station ID used for keepalive authentication.
Password	The password used for authentication.
Allow access-reject	Indicates whether both access-accept and access-reject are considered as success for the keepalive authentication request.
Detect-dead-server:	
Consecutive-failures	The number of consecutive failures, for any AAA manager, before a server's state is changed from "Active" to "Down".
Response-timeout	The time period for any AAA manager to wait for a response to any message before a server's state is changed from "Active" to "Down", in seconds.
Keepalive	Indicates whether the AAA server alive-dead detect mechanism based on sending keepalive authentication messages to all authentication servers is enabled.
Accounting:	
Algorithm	The RADIUS accounting server selection algorithm for the current context.
Deadtime	The time period to wait before changing the state of a RADIUS server from "Down" to "Active", in minutes.
Fire-And-Forget	Displays whether or not the Fire-and-Forget feature is enabled in the AAA Group configuration.
Max-outstanding	The maximum number of messages a AAA manager will queue.
Max-retries	The maximum number of times communication with a AAA server will be attempted before it is marked as "Not Responding" and the detect dead server's consecutive failures count is incremented.
Max-transmissions	The maximum number of re-transmissions for RADIUS accounting requests.
Max-pdu-size	The maximum sized packet data unit which can be accepted/generated, in bytes.
Interim-timeout	The timeout period for sending accounting INTERIM-UPDATE records, in seconds.
Interim-downlink-volume	The downlink volume limit that triggers RADIUS interim accounting, in bytes.
Interim-uplink-volume	The uplink volume limit that triggers RADIUS interim accounting, in bytes.
Interim-total-volume	The total volume limit for RADIUS interim accounting, in bytes.
Timeout	The time period to wait for a response from a RADIUS server before retransmitting a request.
Remote-address	Indicates whether remote IP address lists are configured, and collection of accounting data for the addresses in those lists on a per-subscriber basis is enabled.
Archive	Indicates whether archiving of RADIUS Accounting messages in the system after the accounting message has exhausted retries to all available RADIUS Accounting servers is enabled.

Field	Description
Apn-to-be-included	The APN name included for RADIUS accounting.
R-P originated:	
Trigger active-start	Indicates whether when an Active-Start is received from the PCF and there has been a parameter change, an R-P event occurs.
Trigger active-handoff	Indicates whether when an Active PCF-to-PFC Handoff occurs, a single or two R-P events will occur (one for the Connection Setup, and the second for the Active-Start).
Trigger active-stop	Indicates whether when an Active-Stop is received from the PCF, an R-P event occurs.
Trigger policy	the overall accounting policy for R-P sessions.
Trigger stop-start	Indicates whether a stop/start RADIUS accounting pair is sent to the RADIUS server when an applicable R-P event occurs.
Handoff policy	The overall accounting policy for R-P sessions.
TOD	The time of day a RADIUS event is generated for accounting.
GTP originated:	
Trigger policy	The RADIUS accounting policy for GTP.
MIP HA:	
Policy	The RADIUS accounting policy for Mobile IP HA calls.
Keepalive:	
Interval	The time period between the two keepalive access requests.
Timeout	The time period between each keepalive access request retries.
Retries	The number of times the keepalive access request is sent before marking the server as unreachable.
consecutive-response	The number of consecutive authentication response after which the server is marked as reachable.
Username	The user name used for authentication.
Calling-station-id	The calling station ID used for keepalive authentication.
Framed-ip-address	The framed-ip-address used for keepalive accounting.
Detect-dead-server:	
Consecutive-failures	The number of consecutive failures, for any AAA manager, before a server's state is changed from "Active" to "Down".
Response-timeout	The time period for any AAA manager to wait for a response to any message before a server's state is changed from "Active" to "Down", in seconds.
Keepalive	Indicates whether the AAA server alive-dead detect mechanism based on sending keepalive authentication messages to all authentication servers is enabled.
Charging:	
Auth-algorithm	The RADIUS authentication algorithm.
Acct-algorithm	The RADIUS accounting algorithm.

Field	Description
Deadtime	The time period to wait before changing the state of a RADIUS server from “Down” to “Active”, in minutes.
Max-outstanding	The maximum number of messages a AAA manager will queue.
Max-retries	The maximum number of times communication with a AAA server will be attempted before it is marked as “Not Responding” and the detect dead server’s consecutive failures count is incremented.
Max-transmissions	The maximum number of re-transmissions for RADIUS requests.
Timeout	The time period to wait for a response from a RADIUS server before retransmitting a request.
Detect-dead-server:	
Consecutive-failures	The number of consecutive failures, for any AAA manager, before a server’s state is changed from “Active” to “Down”.
Response-timeout	The time period for any AAA manager to wait for a response to any message before a server’s state is changed from “Active” to “Down”, in seconds.

Chapter 68

show active-charging

This chapter includes the `show active-charging` command output tables.

show active-charging analyzer statistics name dns

Table 69. show active-charging analyzer statistics name dns Command Output Descriptions

Field	Description
ACS DNS Session Stats:	
Total Uplink Bytes	The total number of DNS bytes detected in uplink direction.
Total Downlink Bytes	The total number of DNS bytes detected in downlink direction.
Total Uplink Pkts	The total number of DNS packets detected in uplink direction.
Total Downlink Pkts	The total number of DNS packets detected in downlink direction.
Unknown OPCODE	The total number of DNS packets with an unknown operational code.
Invalid Pkts	The total number of invalid DNS packets detected.
DNS Over TCP:	
Uplink Bytes	The total number of DNS uplink bytes that were detected over TCP.
Downlink Bytes	The total number of DNS downlink bytes that were detected over TCP.
Uplink Pkts	The total number of DNS uplink packets that were detected over TCP.
Downlink Pkts	The total number of DNS downlink packets that were detected over TCP.
Request:	
A Query Type	The total number of DNS requests received for A query types.
CNAME Query Type	The total number of DNS requests received for CNAME query types.
NS Query Type	The total number of DNS requests received for NS query types.
PTR Query Type	The total number of DNS requests received for PTR query types.
SRV Query Type	The total number of DNS requests received for SRV query types.
Unknown Query Type	The total number of DNS requests received for unknown query types.
AAAA Query Type	The total number of DNS requests received for AAAA query types.
Response:	
A Query Type	The total number of DNS responses received for A query types.
CNAME Query Type	The total number of DNS responses received for CNAME query types.
NS Query Type	The total number of DNS responses received for NS query types.
PTR Query Type	The total number of DNS responses received for PTR query types.
SRV Query Type	The total number of DNS responses received for SRV query types.
Unknown Query Type	The total number of DNS responses received for unknown query types.

Field	Description
AAAA Query Type	The total number of DNS responses received for AAAA query types.

show active-charging analyzer statistics name h323

Table 70. show active-charging analyzer statistics name h323 Command Output Descriptions

Field	Description
H323 Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Packets	Total number of packets uplinked.
Total Downlink Packets	Total number of packets downlinked.
Total H323 calls	Total number of H323 calls.
Total RAS messages	Total number of RAS messages.
Total Q931 messages	Total number of Q931 messages.
Total H245 messages	Total number of H245 messages.

show active-charging analyzer statistics name h323 verbose

Table 71. show active-charging analyzer statistics name h323 verbose Command Output Descriptions

Field	Description
H323 Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Packets	Total number of packets uplinked.
Total Downlink Packets	Total number of packets downlinked.
Total H323 calls	Total number of H323 calls.
Total RAS messages	Total number of RAS messages.
Total Q931 messages	Total number of Q931 messages.
Total H245 messages	Total number of H245 messages.
RAS messages	
Uplink	Total number of uplink packets sent from the subscriber for RAS messages.
Downlink	Total number of downlink packets sent from the subscriber for RAS messages.
GatekeeperRequest	The message sent from the H323 endpoint to find a Gatekeeper.
GatekeeperConfirm	The message sent from the Gatekeeper to H323 endpoint which requested for service.
GatekeeperReject	The message sent from the Gatekeeper to H323 endpoint indicating that it must try a different Gatekeeper.
RegistrationRequest	The message sent from the H323 endpoint to register to a particular Gatekeeper.
RegistrationConfirm	The message sent from the Gatekeeper to H323 endpoint indicating that it has been registered.
RegistrationReject	The message sent from the Gatekeeper to H323 endpoint indicating that the registration failed.
UnregistrationRequest	The message sent from the H323 endpoint to unregister from a particular Gatekeeper.
UnregistrationConfirm	The message sent from the Gatekeeper to H323 endpoint indicating that it has been unregistered.
UnregistrationReject	The message sent from the Gatekeeper to H323 endpoint indicating that unregistration failed.
AdmissionRequest	The message sent from the H323 endpoint to a Gatekeeper before accepting or initiating a call.
AdmissionConfirm	The message sent from the Gatekeeper to H323 endpoint indicating that the call is allowed.
AdmissionReject	The message sent from the Gatekeeper to H323 endpoint indicating that the call is not allowed.
LocationRequest	The message sent to the Gatekeeper requesting the transport address of an endpoint.
LocationConfirm	The message sent from the Gatekeeper containing the transport address of an endpoint.

Field	Description
LocationReject	The message sent from the Gatekeeper indicating that the location request is rejected.
DisengageRequest	The message sent from an H323 endpoint to Gatekeeper indicating that the call is getting dropped.
DisengageConfirm	The message confirming the DisengageRequest message from the Gatekeeper.
DisengageReject	The message sent from the Gatekeeper if an endpoint is not registered.
InfoRequest	The message sent from the Gatekeeper to endpoint requesting the status information.
InfoRequestResponse	The message sent from the H323 endpoint to Gatekeeper containing the status information.
RequestInProgress	The message sent by the Gatekeeper or endpoint to indicate to RAS that it cannot respond in normal processing time.
Unclassified	The RAS message that is not classified by the H323 ALG.
Q931 messages	
Uplink	Total number of uplink packets sent from the subscriber for Q931 messages.
Downlink	Total number of downlink packets sent from the subscriber for Q931 messages.
Alerting	The message sent by the called user to indicate that alerting has been initiated.
CallProceeding	The message sent by an H323 endpoint indicating that it has initiated to set up the call.
Setup	The message sent by the calling H323 endpoint to the called H323 endpoint.
Connect	The message sent by the called H323 endpoint to the calling H323 endpoint indicating the acceptance of call.
ReleaseComplete	The message sent by the called H323 endpoint indicating the release of the call.
Facility	The message used to redirect a call or start a new H245 channel.
Progress	The message used to indicate the progress of a call.
Information	The message sent by the called H323 endpoint to provide additional information for a call.
Unclassified	The Q931 message that is not classified by the H323 ALG.
H245 messages	
Uplink	Total number of uplink packets sent from the subscriber for H245 messages.
Downlink	Total number of downlink packets sent from the subscriber for H245 messages.
OpenLogicalChannel	The message sent by an H323 endpoint to open a logical connection between two endpoints.
OpenLogicalChannelAck	The message sent by an H323 endpoint to accept the connection request in an open logical channel.
OpenLogicalChannelReject	The message sent by an H323 endpoint to reject the connection request in an open logical channel.
OpenLogicalChannelConfirm	The message sent by an H323 endpoint indicating that the reverse channel is open.
RequestChannelClose	The message sent by an H323 endpoint to close an existing logical channel between two endpoints.
CloseLogicalChannel	The message sent by an H323 endpoint to close an existing logical channel between two endpoints.

Field	Description
CloseLogicalChannelAck	The message sent by an H323 endpoint to confirm the close of a logical channel.
EndSessionCommand	The message sent by an H323 endpoint to indicate end of H245 session.
Unclassified	The H245 message that is not classified by the H323 ALG.

show active-charging analyzer statistics name icmpv6

Table 72. show active-charging analyzer statistics name icmpv6 Command Output Descriptions

Field	Description
ACS ICMPv6 Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Pkts	Total number of packets uplinked.
Total Downlink Pkts	Total number of packets downlinked.
Uplink Bytes Fragmented	Total number of uplink bytes that were fragmented.
Downlink Bytes Fragmented	Total number of downlink bytes that were fragmented.
Uplink Pkts Fragmented	Total number of uplink packets that were fragmented.
Downlink Pkts Fragmented	Total number of downlink packets that were fragmented.
Uplink Bytes Invalid	Total number of invalid uplink bytes.
Downlink Bytes Invalid	Total number of invalid downlink bytes.
Uplink Pkts Invalid	Total number of invalid uplink packets.
Downlink Pkts Invalid	Total number of invalid downlink packets.

show active-charging analyzer statistics name ip verbose

Table 73. show active-charging analyzer statistics name ip verbose Command Output Descriptions

Field	Description
ACS IP Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Pkts	Total number of packets uplinked.
Total Downlink Pkts	Total number of packets downlinked.
Uplink Bytes Fragmented	Total number of uplink bytes that were fragmented.
Downlink Bytes Fragmented	Total number of downlink bytes that were fragmented.
Uplink Pkts Fragmented	Total number of uplink packets that were fragmented.
Downlink Pkts Fragmented	Total number of downlink packets that were fragmented.
Uplink Bytes Invalid Length	Total number of uplink bytes of invalid length.
Downlink Bytes Invalid Length	Total number of downlink bytes of invalid length.
Uplink Pkts Invalid Length	Total number of uplink packets of invalid length.
Downlink Pkts Invalid Length	Total number of downlink packets of invalid length.
Uplink Bytes Invalid Length (After Reassembly)	Total number of uplink bytes of invalid length after reassembly.
Downlink Bytes Invalid Length (After Reassembly)	Total number of downlink bytes of invalid length after reassembly.
Uplink Pkts Invalid Length (After Reassembly)	Total number of uplink packets of invalid length after reassembly.
Downlink Pkts Invalid Length (After Reassembly)	Total number of downlink packets of invalid length after reassembly.
Uplink Bytes Invalid Version	Total number of uplink bytes of invalid version.
Downlink Bytes Invalid Version	Total number of downlink bytes of invalid version.
Uplink Pkts Invalid Version	Total number of uplink packets of invalid version.
Downlink Pkts Invalid Version	Total number of downlink packets of invalid version.
Uplink Bytes Invalid Checksum	Total number of bytes received in uplink direction with invalid checksum errors.
Downlink Bytes Invalid Checksum	Total number of bytes received in downlink direction with invalid checksum errors.
Uplink Pkts Invalid Checksum	Total number of packets received in uplink direction with invalid checksum errors.

■ show active-charging analyzer statistics name ip verbose

Field	Description
Downlink Pkts Invalid Checksum	Total number of packets received in downlink direction with invalid checksum errors.
Uplink Bytes IP reassembly Timeout	Total number of bytes in uplink traffic dropped due to IP reassembly timeout.
Uplink Pkts IP reassembly Timeout	Total number of packets in uplink traffic dropped due to IP reassembly timeout.
Downlink Bytes IP reassembly Timeout	Total number of bytes in downlink traffic dropped due to IP reassembly timeout.
Downlink Pkts IP reassembly Timeout	Total number of packets in downlink traffic dropped due to IP reassembly timeout.
Uplink Bytes IP reassembly Max. Fragments reached	Total number of times Max fragments was reached in uplinked bytes reassembly.
Uplink Pkts IP reassembly Max. Fragments reached	Total number of times Max fragments was reached in uplinked packets reassembly.
Downlink Bytes IP reassembly Max. Fragments reached	Total number of times Max fragments was reached in downlinked bytes reassembly.
Downlink Pkts IP reassembly Max. Fragments reached	Total number of times Max fragments was reached in downlinked packets reassembly.
Uplink Bytes received after reassembly	Total number of uplink bytes received after reassembly.
Uplink Pkts received after reassembly	Total number of uplink packets received after reassembly.
Downlink Bytes received after reassembly	Total number of downlink bytes received after reassembly.
Downlink Pkts received after reassembly	Total number of downlink packets received after reassembly.

show active-charging analyzer statistics name ipv6

Table 74. show active-charging analyzer statistics name ipv6 Command Output Descriptions

Field	Description
ACS IPv6 Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Pkts	Total number of packets uplinked.
Total Downlink Pkts	Total number of packets downlinked.
Uplink Bytes Fragmented	Total number of uplink bytes that were fragmented.
Downlink Bytes Fragmented	Total number of downlink bytes that were fragmented.
Uplink Pkts Fragmented	Total number of uplink packets that were fragmented.
Downlink Pkts Fragmented	Total number of downlink packets that were fragmented.
Uplink Bytes Invalid	Total number of invalid uplink bytes.
Downlink Bytes Invalid	Total number of invalid downlink bytes.
Uplink Pkts Invalid	Total number of invalid uplink packets.
Downlink Pkts Invalid	Total number of invalid downlink packets.

show active-charging analyzer statistics name ipv6 verbose

Table 75. show active-charging analyzer statistics name ipv6 verbose Command Output Descriptions

Field	Description
ACS IPv6 Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Pkts	Total number of packets uplinked.
Total Downlink Pkts	Total number of packets downlinked.
Uplink Bytes Fragmented	Total number of uplink bytes that were fragmented.
Downlink Bytes Fragmented	Total number of downlink bytes that were fragmented.
Uplink Pkts Fragmented	Total number of uplink packets that were fragmented.
Downlink Pkts Fragmented	Total number of downlink packets that were fragmented.
Uplink Bytes Invalid Length	Total number of uplink bytes of invalid length.
Downlink Bytes Invalid Length	Total number of downlink bytes of invalid length.
Uplink Pkts Invalid Length	Total number of uplink packets of invalid length.
Downlink Pkts Invalid Length	Total number of downlink packets of invalid length.
Uplink Bytes Invalid Length (After Reassembly)	Total number of uplink bytes of invalid length after reassembly.
Downlink Bytes Invalid Length (After Reassembly)	Total number of downlink bytes of invalid length after reassembly.
Uplink Pkts Invalid Length (After Reassembly)	Total number of uplink packets of invalid length after reassembly.
Downlink Pkts Invalid Length (After Reassembly)	Total number of downlink packets of invalid length after reassembly.
Uplink Bytes IP reassembly Timeout	Total number of bytes in uplink traffic dropped due to IP reassembly timeout.
Uplink Pkts IP reassembly Timeout	Total number of packets in uplink traffic dropped due to IP reassembly timeout.
Downlink Bytes IP reassembly Timeout	Total number of bytes in downlink traffic dropped due to IP reassembly timeout.
Downlink Pkts IP reassembly Timeout	Total number of packets in downlink traffic dropped due to IP reassembly timeout.
Uplink Bytes IP reassembly Max. Fragments reached	Total number of times Max fragments was reached in uplinked bytes reassembly.
Uplink Pkts IP reassembly Max. Fragments reached	Total number of times Max fragments was reached in uplinked packets reassembly.

Field	Description
Downlink Bytes IP reassembly Max. Fragments reached	Total number of times Max fragments was reached in downlinked bytes reassembly.
Downlink Pkts IP reassembly Max. Fragments reached	Total number of times Max fragments was reached in downlinked packets reassembly.

show active-charging analyzer statistics name p2p verbose

Table 76. show active-charging analyzer statistics name p2p verbose Command Output Descriptions

Field	Description
Non-P2P	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Skype-non-voice	
 Important: The following counters are available only for 10.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Skype-voice	
 Important: The following counters are available only for 10.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Skype-non-voice	
 Important: The following counters are available only for release 11.0.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.

Field	Description
Downlink Pkts:	The total number of packets downlinked.
Skype-others	
 Important: The following counters are available only for 12.0 and later releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Skype-audio	
 Important: The following counters are available only for 11.0 and later releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Bittorrent	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Edonkey	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Msn-non-voice	
 Important: These counters are available only for 10.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.

■ show active-charging analyzer statistics name p2p verbose

Field	Description
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Msn-voice	
 Important: These counters are available only for 10.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Msn-video	
 Important: These counters are available only for 11.0 and later releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Msn-non-a/v	
 Important: These counters are available only for release 11.0.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Msn-others	
 Important: These counters are available only for release 12.0 and later releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.

Field	Description
Msn-audio	
 Important: These counters are available only for 11.0 and later releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Yahoo-non-voice	
 Important: These counters are available only for 10.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Yahoo-voice	
 Important: These counters are available only for 10.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Yahoo-non-audio	
 Important: The following counters are available only for release 11.0.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.

Field	Description
Yahoo-video	
 Important: These counters are available only for 12.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Yahoo-others	
 Important: These counters are available only for 12.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Yahoo-audio	
 Important: The following counters are available only for 11.0 and later releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Orb	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Gnutella	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.

Field	Description
Downlink Pkts:	The total number of packets downlinked.
Jabber	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Slingbox	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Winny	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Fasttrack	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Manolito	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Pando	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Filetopia	

■ show active-charging analyzer statistics name p2p verbose

Field	Description
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Soulseek	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Ppstream	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Qq	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Qqlive	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Mute	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Gadugadu	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.

Field	Description
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Feidian	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Applejuice	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Zattoo	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Skinny	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Sopcast	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Ares	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.

■ show active-charging analyzer statistics name p2p verbose

Field	Description
Directconnect	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Imesh	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Pplive	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Oscar	
 Important: These counters are available only for 10.0 and earlier releases.	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Oscar-non-voice	
 Important: These counters are available only for 10.0 and earlier releases.	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.

Field	Description
Oscar-voice	
 Important: These counters are available only for 10.0 and earlier releases.	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Oscar-non-audio	
 Important: The following counters are available only for 11.0 and later releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Oscar-video	
 Important: These counters are available only for 12.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Oscar-others	
 Important: These counters are available only for 12.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.

Field	Description
Oscar-audio	
 Important: The following counters are available only for 11.0 and later releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Popo	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Irc	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Steam	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Ddlink	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Halfife2	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.

Field	Description
Downlink Pkts	The total number of packets downlinked.
Hamachivpn	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Tvants	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Tvuplayer	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Uusee	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Vpnx	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Vtun	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Winmx	

■ show active-charging analyzer statistics name p2p verbose

Field	Description
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Wofwarcraft	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Xbox	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Iskoot	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Fring	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Oovoo	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.

Field	Description
Gtalk-non-voice	
 Important: The following counters are available only for 10.0 and earlier releases.	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Gtalk-voice	
 Important: The following counters are available only for 10.0 and earlier releases.	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Gtalk-non-audio	
 Important: The following counters are available only for 11.0 and later releases.	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Gtalk-video	
 Important: These counters are available only for 12.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.

Field	Description
Gtalk-others	
 Important: These counters are available only for 12.0 and earlier releases.	
Uplink Bytes:	The total number of bytes uplinked.
Downlink Bytes:	The total number of bytes downlinked.
Uplink Pkts:	The total number of packets uplinked.
Downlink Pkts:	The total number of packets downlinked.
Gtalk-audio	
 Important: The following counters are available only for 11.0 and later releases.	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Freenet	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Aimini	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Battlefld	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Openft	
Uplink Bytes	The total number of bytes uplinked.

Field	Description
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Qqgame	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Quake	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Secondlife	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Actsnc	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Nimbuzz	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Iax	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.

■ show active-charging analyzer statistics name p2p verbose

Field	Description
Downlink Pkts	The total number of packets downlinked.
Paltalk	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Warcft3	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Rdp	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Iptv	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Uplink Bytes	The total number of bytes uplinked.
Pandora	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Icecast	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.

Field	Description
Kontiki	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Meebo	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Shoutcast	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Truphone	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Thunder	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Armagettron	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Blackberry	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.

■ show active-charging analyzer statistics name p2p verbose

Field	Description
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Citrix	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Clubpenguin	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Crossfire	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Dofus	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Fiesta	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Florensia	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.

Field	Description
Funshion	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Guildwars	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Isakmp	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Maplestory	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Mgcp	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Octoshape	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Off	
Uplink Bytes	The total number of bytes uplinked.

■ show active-charging analyzer statistics name p2p verbose

Field	Description
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Ps3	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Rmstream	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Rfactor	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Splashfighter	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
SsdP	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Stealthnet	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.

Field	Description
Downlink Pkts	The total number of packets downlinked.
Stun	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Teamspeak	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Tor	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
VeohTV	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Wii	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Wmstream	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Wofkungfu	

■ show active-charging analyzer statistics name p2p verbose

Field	Description
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Xdce	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Yourfreetunnel	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Facebook	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Gmail	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Itunes	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Myspace	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.

Field	Description
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Teamviewer	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Twitter	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Viber	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Scydo	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.
Whatsapp	
Uplink Bytes	The total number of bytes uplinked.
Downlink Bytes	The total number of bytes downlinked.
Uplink Pkts	The total number of packets uplinked.
Downlink Pkts	The total number of packets downlinked.

show active-charging analyzer statistics name pptp

Table 77. show active-charging analyzer statistics name pptp Command Output Descriptions

Field	Description
ACS PPTP Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Pkts	Total number of packets uplinked.
Total Downlink Pkts	Total number of packets downlinked.
Total GRE Sessions	Total number of GRE sessions.
Invalid PPTP Pkts	Total number of invalid PPTP packets.
Unknown PPTP Pkts	Total number of unknown PPTP packets.
ACS PPTP-GRE Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Pkts	Total number of packets uplinked.
Total Downlink Pkts	Total number of packets downlinked.

show active-charging analyzer statistics name sip

Table 78. show active-charging analyzer statistics name sip Command Output Descriptions

Field	Description
SIP Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Pkts	Total number of packets uplinked.
Total Downlink Pkts	Total number of packets downlinked.
Uplink Valid Bytes	Total number of valid bytes uplinked.
Downlink Valid Bytes	Total number of valid bytes downlinked.
Uplink Valid Pkts	Total number of valid packets uplinked.
Downlink Valid Pkts	Total number of valid packets downlinked.
Uplink Retry Bytes	Total number of retry bytes uplinked.
Downlink Retry Bytes	Total number of retry bytes downlinked.
Uplink Retry Pkts	Total number of retry packets uplinked.
Downlink Retry Pkts	Total number of retry packets downlinked.
Uplink Error Bytes	Total number of error bytes uplinked.
Downlink Error Bytes	Total number of error bytes downlinked.
Uplink Error Pkts	Total number of error packets uplinked.
Downlink Error Pkts	Total number of error packets downlinked.
SIP Calls	Total number of SIP calls.
SIP Advanced Session Stats	
Total Uplink Bytes	Total uplink bytes processed by SIP ALG.
Total Downlink Bytes	Total downlink bytes processed by SIP ALG.
Total Uplink Packets	Total uplink packets processed by SIP ALG.
Total Downlink Packets	Total downlink packets processed by SIP ALG.
SIP Calls	Total number of active SIP calls processed by SIP ALG.

Field	Description
SIP Request	Displays the following SIP Requests. • Register: Total REGISTER requests. • Invite: Total INVITE requests. • Ack: Total ACK requests. • Bye: Total BYE requests. • Info: Total INFO requests. • Prack: Total PRACK requests. • Refer: Total REFER requests. • Cancel: Total CANCEL requests. • Update: Total UPDATE requests. • Message: Total MESSAGE requests. • Options: Total OPTIONS requests. • Publish: Total PUBLISH requests. • Subscribe: Total SUBSCRIBE requests. • Notify: Total NOTIFY requests.
Total Received	Total number of SIP requests received by SIP ALG.
Total Transmitted	Total number of SIP requests transmitted by SIP ALG.
Retransmitted	Total number of SIP requests retransmitted by SIP ALG.
SIP Response	Displays the following SIP Responses. • 1XX: Total 1xx responses. • 2XX: Total 2xx responses. • 3XX: Total 3xx responses. • 4XX: Total 4xx responses. • 5XX: Total 5xx responses. • 6XX: Total 6xx responses.
Total Received	Total number of SIP responses received by SIP ALG.
Total Transmitted	Total number of SIP responses transmitted by SIP ALG.
Retransmitted	Total number of SIP responses retransmitted by SIP ALG.

show active-charging analyzer statistics name tcp verbose

Table 79. show active-charging analyzer statistics name tcp verbose Command Output Descriptions

Field	Description
ACS TCP Session Stats:	
Total Uplink Bytes	The total number of bytes uplinked.
Total Downlink Bytes	The total number of bytes downlinked.
Total Uplink Pkts	The total number of packets uplinked.
Total Downlink Pkts	The total number of packets downlinked.
Uplink Bytes Retrans	The number of uplink bytes that were retransmitted.
Downlink Bytes Retrans	The number of downlink bytes that were retransmitted.
Uplink Pkts Retrans	The number of uplink packets that were retransmitted.
Downlink Pkts Retrans	The number of downlink packets that were retransmitted.
Uplink Out of Order Pkts Successfully Analyzed	The number of uplink out of order packets that were successfully analyzed.
Downlink Out of Order Pkts Successfully Analyzed	The number of downlink out of order packets that were successfully analyzed.
Uplink Out of Order Pkts Failure	The number of uplink out of order packets that failed.
Downlink Out of Order Pkts Failure	The number of downlink out of order packets that failed.
Uplink Out of Order Pkts Retransmitted	The number of uplink out of order packets that retransmitted.
Downlink Out of Order Pkts Retransmitted	The number of downlink out of order packets that retransmitted.
Uplink Bytes Invalid Length	The number of uplink bytes of invalid length.
Downlink Bytes Invalid Length	The number of downlink bytes of invalid length.
Uplink Pkts Invalid Length	The number of uplink packets of invalid length.
Downlink Pkts Invalid Length	The number of downlink packets of invalid length.
Uplink Bytes Out of Sequence	The number of uplink bytes out of sequence.
Downlink Bytes Out of Sequence	The number of downlink bytes out of sequence.
Uplink Pkts Out of Sequence	The number of uplink packets that were out of sequence.
Downlink Pkts Out of Sequence	The number of downlink packets that were out of sequence.
Uplink Bytes Invalid Close Wait	The total number of bytes received in uplink direction while system is in invalid wait state to close connection.

Field	Description
Downlink Bytes Invalid Close Wait	The total number of bytes received in downlink direction while system is in invalid wait state to close connection.
Uplink Pkts Invalid Close Wait	The total number of packets received in uplink direction while system is in invalid wait state to close connection.
Downlink Pkts Invalid Close Wait	The total number of bytes received in downlink direction while system is in invalid wait state to close connection.
Uplink Bytes Invalid Close State	The total number of bytes received in uplink direction while connection is in invalid closed state.
Downlink Bytes Invalid Close State	The total number of bytes received in downlink direction while connection is in invalid closed state.
Uplink Pkts Invalid Close State	The total number of packets received in uplink direction while connection is in invalid closed state.
Downlink Pkts Invalid Close State	Total number of packets received in downlink direction while connection is in invalid closed state.
Uplink Bytes Out of Order Timeout Failure	The total number of bytes received in uplink direction while timeout duration to wait for out of order packets is exhausted.
Downlink Bytes Out of Order Timeout Failure	The total number of bytes received in downlink direction while timeout duration to wait for out of order packets is exhausted.
Uplink Pkts Out of Order Timeout Failure	The total number of packets received in uplink direction while timeout duration to wait for out of order packets is exhausted.
Downlink Pkts Out of Order Timeout Failure	The total number of bytes received in downlink direction while timeout duration to wait for out of order packets is exhausted.
Uplink Bytes Out of Order Failure in Allocation	The total number of bytes received in uplink direction while allocation of out of order packet is failed.
Downlink Bytes Out of Order Failure in Allocation	The total number of bytes received in downlink direction while allocation of out of order packet is failed.
Uplink Pkts Out of Order Failure in Allocation	The total number of packets received in uplink direction while allocation of out of order packet is failed.
Downlink Pkts Out of Order Failure in Allocation	The total number of packets received in downlink direction while allocation of out of order packet is failed.
Uplink Pkts Invalid Window Size	The total number of packets received in uplink direction with invalid window size for buffer.
Uplink Bytes Invalid Window Size	The total number of bytes received in uplink direction with invalid window size for buffer.
Downlink Pkts Invalid Window Size	The total number of packets received in downlink direction with invalid window size for buffer.
Downlink Bytes Invalid Window Size	Total total number of bytes received in downlink direction with invalid window size for buffer.
Uplink Pkts Invalid Checksum	The total number of packets received in uplink direction with invalid checksum errors.
Uplink Bytes Invalid Checksum	The total number of bytes received in uplink direction with invalid checksum errors.

Field	Description
Downlink Pkts Invalid Checksum	The total number of packets received in downlink direction with invalid checksum errors.
Downlink Bytes Invalid Checksum	The total number of bytes received in downlink direction with invalid checksum errors.

show active-charging analyzer statistics name tftp

Table 80. show active-charging analyzer statistics name tftp Command Output Descriptions

Field	Description
ACS TFTP Session Stats:	
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total Uplink Packets	Total number of packets uplinked.
Total Downlink Packets	Total number of packets downlinked.
Total Read Sessions	Total number of read sessions.
Total Write Sessions	Total number of write sessions.
Total Invalid Control Packets	Total number of invalid control packets.
Total Invalid Data Packets	Total number of invalid data packets.
Total Packets with Unknown Request Type	Total number of packets with unknown request type.

show active-charging bandwidth-policy name

Table 81. show active-charging bandwidth-policy name Command Output Descriptions

Field	Description
Service Name	Name of the ActiveCharging Service.
Bandwidth Policy Name	Name of the bandwidth policy.
Flow Limit-for-Bandwidth ID and Group-ID Associations:	
Flow Limit-for-Bandwidth ID	The ACS flow limit-for-bandwidth ID.
Group-ID	The ACS Bandwidth Policy Group ID.
Total number of bw-ids configured in Bandwidth-Policy <policy>	The total number of bandwidth IDs configured in the specified bandwidth policy.
Group-Limits for Group-ID	The group limits set for the group ID.
Rates & Actions	Lists the following rates and actions: • Peak Data Rate • Peak Burst Size • Violate Action • Committed Data Rate • Committed Burst Size • Exceed Action
Uplink	For bandwidth control in uplink direction indicates: • Peak data rate in bits per second • Peak burst size in bytes • Violate action configured: discard/lower-ip-precedence • Committed data rate in bits per second • Committed burst size in bytes • Exceed action configured: discard/lower-ip-precedence
Downlink	For bandwidth control in downlink direction indicates: • Peak data rate in bits per second • Peak burst size in bytes • Violate action configured: discard/lower-ip-precedence • Committed data rate in bits per second • Committed burst size in bytes • Exceed action configured: discard/lower-ip-precedence

■ show active-charging bandwidth-policy name

Field	Description
Total number of group-limits configured in Bandwidth-Policy <policy>	The total number of group limits configured in the specified bandwidth policy.
Total bandwidth-policies found	The total number of bandwidth policies matching the specified criteria.

show active-charging charging-action all

Table 82. show active-charging charging-action all Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
Charging Action Name	Name of the charging action. There may be several charging actions configured per charging service.
Content ID	The content ID to use in the generated billing records as the Rating-Group Attribute Value Pair (AVP) for this charging action.
Service ID	Service identifier value configured in the Charging Action mode.
EDRs	Indicates whether Event Detail Record (EDR) billing action for packets matching this charging action is enabled, and the EDR format.  Important: This field is available only in 12.1 and earlier releases.
Charging EDRs	Indicates whether EDR billing action for packets matching this charging action is enabled, and the charging EDR format name.  Important: This field is available only in 12.2 and later releases.
Reporting EDRs	Indicates whether EDR billing action for packets matching this charging action is enabled, and the reporting EDR format name.  Important: This field is available only in 12.2 and later releases.
EGCDRs	Indicates whether eG-CDRs for billing of the packets matching with this charging action is enabled.
UDRs	Indicates whether UDR generation is enabled.
Flow Idle Timeout	Displays the idle-timeout for flows inspected by ECS.
Limit For Flow Type	Indicates whether Limit For Flow Type is enabled/disabled.
Limit For Uplink Bandwidth	Indicates whether Limit For Uplink Bandwidth is enabled/disabled.
Limit For Downlink Bandwidth	Indicates whether Limit For Downlink Bandwidth is enabled/disabled.
QoS Renegotiate Traffic-Class	Indicates whether QoS Renegotiate Traffic-Class is enabled/disabled.
QoS Class Identifier	Indicates whether QoS Class Identifier is configured.

■ show active-charging charging-action all

Field	Description
IP Type of Service	Indicates whether IP Type of Service is configured.
Flow-Mapping Idle Timeout	Indicates the flow-mapping timeout value, in seconds.
Count Retransmissions	Indicates whether Count Retransmissions is enabled.
Content Filtering	Indicates whether Content Filtering is enabled.
Type of Service	Displays the service type (PDSN, GGSN, etc.)
Count Retries	Indicates if the ECS service is counting retransmitted packets per subscriber.
GCDRs	Indicates if G-CDRs are enabled or disabled.
Discard	Specifies if the packets that match the flow should be discarded.
Credit Control	Specifies if credit control is being used in this charging action
Flow Action	
Redirect URL	Indicates whether the redirection of URL for packets that matches a ruledef is enabled/disabled. If enabled, redirects the HTTP packets matched to this Ruledef to the specified URL.
Clear Quota Retry Timer	Indicates whether Clear Quota Retry Timer is enabled/disabled. If enabled, resets the Credit Control Application quota retry timer for specific subscriber upon redirection.
Conditional Redirect	Indicates whether Conditional Redirect end token action is enabled/disabled. If enabled, conditionally redirects the HTTP packets matched to a configured user-agent to a specified URL.
Discard	Indicates whether discard action is enabled/disabled. If enabled, discards the packet associated with the charging action.
Terminate-Flow	Indicates whether terminate flow action is enabled/disabled. If enabled, terminates the TCP connection gracefully between the subscriber and external server and sends a TCP FIN to the subscriber and a TCP RST to the server. If the flow does not use TCP, this option simply discards the packets. This option is used for flows that use TCP only.
Billing Action	
Event Data Record	Indicates whether EDRs are enabled/disabled.
GGSN charging Data Record	Indicates whether GGSN CDRs are enabled/disabled.
User Data Record	Indicates whether UDRs are enabled/disabled.
Radius Accounting Record	Indicates whether RADIUS accounting records is enabled/disabled.
Charge Volume	Indicates the charge volume for packet-length (payload).
Total charging action(s) found	The number of charging actions that matched the criteria.
Readdressing	Indicates whether CAE re-addressing on the Mobile Video Gateway is enabled or disabled.
Percentage Rate Reduction	If enabled, indicates the configured bit rate reduction for mobile video as a percentage of the input bit rate.

show active-charging charging-action statistics name

Table 83. show active-charging charging-action statistics name Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
Charging Action Name	Name of the charging action. There are be several charging actions per charging service.
Uplink Pkts Retrans	Total number of uplink packets that were retransmitted.
Downlink Pkts Retrans	Total number of downlink packets that were retransmitted.
Uplink Bytes Retrans	Total number of uplink bytes that were retransmitted.
Downlink Bytes Retrans	Total number of downlink bytes that were retransmitted.
Upl Pkts Readdressed	Total number of readdressed uplink packets.
Dnl Pkts Readdressed	Total number of readdressed downlink packets.
Upl Bytes Readdressed	Total number of readdressed uplink bytes.
Dnl Bytes Readdressed	Total number of readdressed downlink bytes.
PP Upl Pkts Readdressed	Total number of post-processed uplink packets readdressed.
PP Dnl Pkts Readdressed	Total number of post-processed downlink packets readdressed.
PP Upl Bytes Readdressed	Total number of post-processed uplink bytes readdressed.
PP Dnl Bytes Readdressed	Total number of post-processed downlink bytes readdressed.
XHeader Information:	
XHeader Bytes Injected	Total number of x-header bytes injected.
XHeader Pkts Injected	Total number of x-header packets injected.
NCQoS Discarded Packets:	
Rule Bound elsewhere	Total number of rules bound elsewhere.
Rule Binding pending	Total number of rule binding pending.
Unbound Rule hit	Total number of unbound rule hits.
Statistic	Statistic type.
flow-action	Total number of matching flows/sessions/packets for the statistic.
pp-flow-action	Total number of matching flows/sessions/packets for the statistic.
flow-limit	Total number of matching flows/sessions/packets for the statistic.
bandwidth-limit	Total number of matching flows/sessions/packets for the statistic.

Field	Description
Total Charging Action(s) matched	Total number of charging actions matching the criteria.
CAE-Readdressing:	
GET Requests redirected	Total number of HTTP GET requests redirected to a CAE.
POST Requests redirected	Total number of HTTP POST requests redirected to a CAE.
Other Requests redirected	Total number of other HTTP requests redirected to a CAE.
HTTP Responses redirected	Total number of HTTP responses redirected to a CAE.
HTTP Requests having xheader inserted	Total number of HTTP requests that have x-headers inserted.
Total Connect failed to video server	Total number of failed connections to the video server.
Total uplink bytes	Total number of uplink bytes.
Total uplink packets	Total number of uplink packets.
Total downlink bytes	Total number of downlink bytes.
Total downlink packets	Total number of downlink packets.

show active-charging content-filtering category policy-id all

Table 84. show active-charging content-filtering category policy-id all Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
Content Filtering Policy	The Content Filtering Policy ID.
Content Filtering Categories	
Category	Category of the content rated.
Priority	Priority of the CF category in the CF Policy.
Action	Action taken for the indicated result of CF analysis.
Content Insert	The content string inserted in place of message returned from prohibited or restricted site or content server.
Redirect	The URL to redirect subscribers.
Reply Code	The reply code specified for www-reply-code-and-terminate-flow action.
EDR	The EDR file format name to generate separate CF EDRs based on action and content category.
Failure Action	The failure end condition if rating cannot be performed.
Discarded-Flow-Content-ID	The content ID for the discarded flows. If not configured, this field is not displayed.

show active-charging content-filtering category statistics rulebase name

Table 85. show active-charging content-filtering category statistics rulebase name Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service in which category-based content filtering application is configured.
Rulebase Name	Name of rulebase for category-based content filtering application.
Content Filtering Statistics	
Flows discarded	Total number of flows discarded in content filtering application.
Flows redirected	Total number of flows redirected in content filtering application.
Flows allowed	Total number of flows allowed in content filtering application.
Flows terminated	Total number of flows terminated in content filtering application.
Flows discarded with content insertion	Total number of flows discarded and information content inserted in header of flow in content filtering application.
Total Flows blocked	Total number of flows blocked in content filtering application.
Total Number of dynamic DB lookups	Total number of lookups in dynamic database for Category-based Content Filtering application. This counter is not available in 9.0 and later releases.
Total number of static DB lookups	Total number of lookups in static URL database for category based content filtering application.
Total number of successful Cache lookups	The total number of successful lookups in cache memory for URLs.
Total number of unknown URLs	Total number of flows/requests with unknown URL.
Actions For Rating Attempts Not Completed	
Flows discarded	Total number of flows discarded in content filtering application.
Flows redirected	Total number of flows redirected in content filtering application.
Flows allowed	Total number of flows allowed in content filtering application.
Flows terminated	Total number of flows terminated in content filtering application.
Flows discarded with content insertion	Total number of flows discarded and information content inserted in header of flow in content filtering application.
Total Flows blocked	Total number of flows blocked in content filtering application.

■ show active-charging content-filtering category statistics rulebase name

Field	Description
Time taken for rating	A URL is classified (rated) as belonging to a distinct category (search, portal, etc.). This column displays the time taken to rate the URL in ms, in time slots of 100 ms, up to 1000 ms, and above 1000 ms.
Number of URLs	Indicates the number of URLs rated in each time slot.
Number of URLs (SRDB)	Indicates the number of URLs rated in a specific time slot from static rating database (SRDB).
Number of URLs (Cache)	Indicates the number of URLs rated in a specific time slot from the cached list of URLs in memory.
Attempts not completed	Indicates the number of URL rating attempts not completed.
Total rulebases matched	Total number of rulebases that matched the criteria.

show active-charging content-filtering category statistics

Table 86. show active-charging content-filtering category statistics Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service in which category-based content filtering application is configured.
Cumulative Content Filtering Statistics:	
Flows discarded	Total number of flows discarded.
Flows redirected	Total number of flows redirected.
Flows allowed	Total number of flows allowed.
Flows terminated	Total number of flows terminated.
Flows discarded with content insertion	Total number of flows discarded and content inserted in header of flow.
Total Flows blocked	Total number of flows blocked.
Total Number of dynamic DB lookups	Total number of lookups in dynamic database. This counter is not available in 9.0 and later releases.
Total number of static DB lookups	Total number of lookups in static URL database.
Total number of successful Cache lookups	Total number of successful URL lookups in cache memory.
Total number of unknown URLs	Total number of flows/requests with unknown URL.
Failure Action (Rating Attempts Not Completed):	
Flows discarded	Total number of flows discarded due to failure action.
Flows redirected	Total number of flows redirected due to failure action.
Flows allowed	Total number of flows allowed due to failure action.
Flows terminated	Total number of flows terminated due to failure action.
Flows discarded with content insertion	Total number of flows discarded and information content inserted in header of flow due to failure action.
Total Flows blocked	Total number of flows blocked due to failure action.
Time taken for rating	A URL is classified (rated) as belonging to a distinct category (search, portal, etc.). This column displays the time taken to rate the URL in ms, in time slots of 100 ms, up to 1000 ms, and above 1000 ms.
Number of URLs	Total number of URLs rated in each time slot.
Attempts not completed	Total number of URL rating attempts not completed.

Field	Description
Cumulative Dynamic Content Filtering Statistics	
Dynamic Flows discarded	Total number of dynamic flows discarded.
Dynamic Flows redirected	Total number of dynamic flows redirected.
Dynamic Flows allowed	Total number of dynamic flows allowed.
Dynamic Flows terminated	Total number of dynamic flows terminated.
Dynamic Flows discarded with content insertion	Total number of dynamic flows discarded and content inserted in header of flow.
Total Dynamic Flows blocked	Total number of dynamic flows blocked.
Total Number of dynamic lookups	Total number of dynamic lookups.
Total number of unknown URLs	Total number of flows/requests with unknown URLs.
Response codes not in range 2xx	Number of responses that were not sent for dynamic rating as the response was not in the 2xx range.
Dynamic Failure Action (Rating Attempts Not Completed):	
Flows discarded	Total number of flows discarded due to failure action.
Flows redirected	Total number of flows redirected due to failure action.
Flows allowed	Total number of flows allowed due to failure action.
Flows terminated	Total number of flows terminated due to failure action.
Flows discarded with content insertion	Total number of flows discarded and information content inserted in header of flow due to failure action.
Total Flows blocked	Total number of flows blocked due to failure action.
Time taken for Dynamic rating	A URL is classified (rated) as belonging to a distinct category (search, portal, etc.). This column displays the time taken to rate the URL in ms, in time slots of 100 ms, up to 1000 ms, and above 1000 ms.
Number of URLs	Total number of URLs rated in each time slot.
Attempts not completed	Total number of URL rating attempts not completed.
Number of Packets Hit per Category	Indicates the specific category and the number of packets hit per category. If during runtime, an x-category was added, the x-category is also displayed.
Number of Packets Blocked per Category	Indicates the specific category and the number of packets blocked per category. If during runtime, an x-category was added, the x-category is also displayed.
Total Responses Inspected	Indicates the number of responses eligible for dynamic rating (i.e. rated as UNKNOW / DYNAM by static rating when dynamic rating is enabled)
Responses Buffered	Indicates the number of responses actually buffered.
Total Dynamic Lookups	Indicates the total number of dynamic lookups of URLs.

Field	Description
Lookups Completed	Indicates the total number of lookups completed.
Responses Too Big	Indicates the size of response more than the maximum value allowed (256KB).
Out of Rating Buffer	Indicates the out of rating buffer limit.
Min Response Size	Indicates the size of the smallest response inspected.
Max Response Size	Indicates the size of the largest response inspected.
Session QLimit Exceeded	Indicates the number of times we exceeded queue limit for a session (i.e. limit on number of packets that can be queued).
Max Pkt per Session	Indicates the maximum number of packets buffered for a single session.
Current Active Sessions	Indicates the current number of responses subjected to dynamic CF.
Max Active Sessions	Indicates the maximum number of responses subjected to dynamic CF simultaneously.

show active-charging content-filtering server-group name

Table 87. show active-charging content-filtering server-group name Command Output Descriptions

Field	Description
Content Filtering Group	Name of the Content Filtering Server Group (CFSG).
Context	The context in which the CFSG is configured.
Origin Address	IP address of the origin endpoint or ICAP client.
Response Timeout	The response-timeout duration configured to wait for response.
Connection Retry Timeout	The connection retry timeout duration configured to check the TCP connection status between ICAP sever and client.
Dictionary	The dictionary used for encoding requests to the server(s).
Timeout Action	The action configured for connection timeout.
Deny Message	The text string message that is returned to the subscriber in a deny response.
URL-extraction	The ICAP URL extraction mode: • after-parsing: Percent-encoded hex characters in URLs sent from the ACF client to the ICAP server are converted to corresponding ASCII characters and sent. • raw: The URLs contain percent-encoded hex characters as is.
Content Filtering Group Connections	The total number of CF server group connections open.
Priority	Displays the priority of the CF server for which statistics has to be displayed.
ICAP Address (Port)	Displays the IP address and port number of ICAP server within CF Server Group.
Max Outstanding	The total number of unanswered outstanding messages to this ICAP server.
ACSMgr Instance	Number of ACS Manager instance.
Connection State	Status of ACS Manager instance for CF server group connection.
Total content filtering groups matching specified criteria	The total number of CFSG matching the criteria.

show active-charging content-filtering server-group statistics verbose

Table 88. show active-charging content-filtering server-group statistics verbose Command Output Descriptions

Field	Description
Content Filtering Group	Name of the Content Filtering Server Group (CFSG).
Connection Statistics	
Current Open Connections	Total number of open connections.
Connection DHOST requests	Total number of DHOST requests.
Successful Connections	Total number of successful connections.
Connections DHOST remove	Total number of connections removed from DHOST.
Connection SHUTDOWN req	Total number of requests for SHUTDOWN.
ACF Unreachable(read)	Total number of attempts for Active Content Filter server (ICAP server) to read.
ACF Unreachable(write)	Total number of attempts for Active Content Filter server (ICAP server) to write.
Reconnect attempts	Total number of reconnect attempts for ACF server (ICAP server).
Connection Timeout	Total number of connections timeout after reconnect attempts for ACF server (ICAP server).
Connection Failure Statistics	
Connection DHOST errors	Total number of DHOST errors in connection.
Connection CONNECT error	Total number of CONNECT errors in connection.
Socket open errors	Total number of errors due to SOCKET open in connection.
Connection bind errors	Total number of BIND errors in connection.
Connection setvr errors	Total number of SETVER errors in connection.
Connection NONBLOCK errors	Total number of NONBLOCK errors in connection.
Connection SHUTDOWN errors	Total number of SHUTDOWN errors in connection.
Incomplete 3-way handshaking	Total number of errors due to incomplete 3-way handshaking in TCP connection.
ACF Statistics	
ACF Requests Created	Total number of requests created for ACF.
Response Timeout	Total number of response timeout for requests to ACF.
Write request success	Total number of successful WRITE requests.
Write request failed	Total number of failed WRITE requests.

Field	Description
Read response success	Total number of successful READ response.
Read response failed	Total number of failed READ response.
HTTP Permit	Total number of HTTP URLs permitted from ACF.
WAP Permit	Total number of WAP URLs permitted from ACF.
HTTP Deny	Total number of HTTP URLs denied from ACF.
WAP Deny	Total number of WAP URLs denied from ACF.
HTTP Redirect	Total number of HTTP URLs redirected from ACF.
WAP Redirect	Total number of WAP URLs redirected from ACF.
Invalid ACTION	Total number of invalid ACTION message from ACF.
Redirect URL not defined	Total number of errors due to undefined redirect URL.
Buffer List Empty	Total number of errors due to empty buffer list.
Failure Action (communication failure with server-group):	
Permit	Total number of connections permitted after connection failure.
Content Insertion	Total number of connections with content inserted after connection failure.
Discard	Total number of connections discarded after connection failure.
Terminate Flow	Total number of connections terminated after connection failure.
Redirect URL	Total number of connections redirected after connection failure.
Total action taken	Total number of actions taken after connection failure.
Num pkts dropped for DENY	Total number of packets dropped after denying the connection due to failure in connection.
Num pkts dropped for REDIRECT	Total number of packets dropped after redirecting the connection due to failure in connection.
Num pkts dropped for DENY Timeout action	Total number of packets dropped after denying the connection due to timeout action.
Num pkts dropped for REDIRECT Timeout action	Total number of packets dropped after redirecting the connection due to timeout action.
Failure Action (communication with server-group not attempted):	ICAP stats indicating failure (like memory allocation failure, server connection error, etc) on ICAP before a request is sent to the ICAP server.
Permit	Total number of connections permitted after connection failure.
Content Insertion	Total number of connections with content inserted after connection failure.
Discard	Total number of connections discarded after connection failure.
Terminate Flow	Total number of connections terminated after connection failure.
Redirect URL	Total number of connections redirected after connection failure.
ACF Req Error Statistics	Statistics related to ACF request errors.

Field	Description
Host field Null	Total number of HTTP GET requests which has the host field NULL.
URL Invalid	Total number of nonblank URLs with strlen != 0 but URL having “”, \t, \n characters only.
Host same as ICAP server:port	Total number of HTTP GET requests with host same as the configured ICAP server port.
ACF Resp Parse Statistics	Statistics related to ACF response parsing.
Parse ACF resp success	Total number of successful ACF parse response.
Parse ACF resp ver err	Total number of successful ACF parse response version error.
Misc Statistics	Miscellaneous statistics.
Total pkts sent	Total number of packets sent through ICAP connection.
Invalid ACF group config	Total number of errors due to invalid CF Server Group (Active Content Filter server groups) configuration.
Invalid bind address	Total number of errors due to invalid binding address configuration.
Invalid ICAP address	Total number of errors due to invalid ICAP server addresses.
ICAP queue length statistics	
SessionMgr ID	Session Manager ID.
ICAP queue length	Queue size of outstanding ICAP requests per Session Manager.
Histogram of ICAP Server's Response time	
Response Time(ms)	Response time slots, in milliseconds.
No Of Responses	Number of responses per time slot.

show active-charging credit-control session-states

Table 89. show active-charging credit-control session-states Command Output Descriptions

Field	Description
Charging	Number of sessions/categories in charging state.
NoCharge	Number of sessions/categories in free-of-charge (received 4011 at MSCC level) state.
Blacklist Service Denied	Number of sessions/categories in Service-Denied (received 4010 at MSCC level) state.
Blacklist Rating Failed	Number of sessions/categories in Rating-Failed (received 5031 at MSCC level) state.
Blacklist Auth Rejected	Number of sessions/categories in Auth-Rejected (received 5003 or 5012 at MSCC level) state.
Blacklist Limit Reached	Number of sessions/categories in Limit-Reached (received 4012 at MSCC level) state.
Blacklist Final Unit	Number of sessions/categories in FUI-Terminated state at MSCC level.
Blacklist Other	Number of sessions/categories in Blacklisted state after recovery.
Pending Initial Request	Number of sessions pending for Initial Credit-Control Answer from the server.
Pending Update Request	Number of sessions pending for Update Credit-Control Answer from the server.
Pending Terminate Request	Number of sessions pending for Terminate Credit-Control Answer from the server.

show active-charging credit-control statistics

Table 90. show active-charging credit-control statistics Command Output Descriptions

Field	Description
Active Charging Service	Name of the ActiveCharging Service.
Credit Control Group	Name of the credit control group. This field is displayed only if there are credit control group(s) configured.
CC Session Stats	
Total Current Sessions	Total number of credit control sessions active.
Total ECS Adds	Total number of ECS sessions added to credit control application.
Total CC Starts	Total number of credit control sessions started.
Total Session Updates	Total number of credit control sessions updated.
Total Terminated	Total number of credit control sessions terminated.
CC Session Failovers	Total number of credit control sessions failed.
CC Message Stats	
Total Messages Received	Total number of credit control messages received.
Total Messages Sent	Total number of credit control messages sent.
Total CC Requests	Total number of Credit Control Request (CCR) messages that went out from system to the credit control server. The CCR can be Initial/Update or Terminate.
Total CC Answers	Total number of Credit Control Answer (CCA) messages that came into system from credit control server.
CCR-Initial	Total number of Initial Credit Control Request (CCR-Initial) messages that went out from system to the credit control server.
CCA-Initial	Total number of Initial Credit Control Answer (CCA-Initial) messages that came into system from Diameter Server.
CCA-Initial Accept	Total number of CCA-Initial-Accept (Initial Credit Control Answer sent and accepted) messages that came into system from Credit Control Server.
CCA-Initial Reject	Total number of CCA-Initial-Reject (Initial Credit Control Answer sent and rejected.) messages that came into system from credit control server.
CCA-Initial Timeouts	Total number of CCA-Initial-Timeouts (Initial Credit Control Answer sent and timed out) messages that came into system from credit control server.

Field	Description
CCR-Update	Total number of CCR-Updates (Credit Control Request with Update) messages that went out from system to the credit control server.
CCA-Update	Total number of CCA-Update (Credit Control Answer for update) messages that came into system from credit control server.
CCA-Update Timeouts	Total number of CCA-Update Timeouts (Credit Control Answer for update sent and timed out) messages that came into system from credit control server.
CCR-Final	Total number of CCR-Final (Credit Control Request with Final) messages that went out from system to the credit control server.
CCA-Final	Total number of CCA-Final (Credit Control Answer for final update sent) messages that came into system from credit control server.
CCA-Final Timeouts	Total number of CCA-Final Timeouts (Credit Control Answer for final update sent and time-out) messages that came into system from credit control server.
ASR	Total number of Abort-Session Request messages came into system from credit control server.
ASA	Total number of Abort-Session Accept messages sent from system to credit control server. This message will be followed by a CCR-Terminate to terminate the session.
RAR	Total number of ReAuth Request messages that came into system from Diameter Server.
RAA	Total number of ReAuth Accept messages sent from system to Credit Control server. This message is followed by a CCR-Update to update the Credit Control server about the session.
CCA Dropped	Total number of Credit Control Answer (CCA) messages dropped by system.
CC Message Error Stats	
Diameter Protocol Errs	Total number of message errors due to Diameter protocol errors.
Transient Failures	Total number of errors that fall within the transient failures category are used to inform a peer that the request could not be satisfied at the time it was received, but may be able to satisfy the request in the future. The Result-Code data field contains 4xxx for Transient Failures.
Permanent Failures	Total number of errors that fall within the permanent failures category are used to inform the peer that the request failed, and should not be attempted again. The Result-Code data field contains 5xxx for Permanent Failures.
Bad Answers	Total number of message errors due to invalid responses.
Unknown Session Reqs	Total number of message errors due to invalid session requests.
Unknown Command Code	Total number of message errors due to invalid/unknown command code (ASR, RAR).
Request Timeouts	Total number of message errors due to request timeout.
Parse Errors	Total number of message errors due to parsing errors.
Unknown Rating Group	Total number of message errors due to invalid/unknown rating groups. Rating group is used to identify a particular type of traffic.
Unknown Rulebase	Total number of message errors due to invalid/unknown rulebase applied.

Field	Description
Unk Failure Handling	Total number of message errors due to invalid/unknown reasons.
CC Update Reporting Reason Stats	
Threshold	For each of the rating group, the credit control server send a threshold (this is also configurable in a system) after which a update needs to be sent. For example, a subscriber quota of 1000 bytes with 900 as threshold is sent to credit control application. When 900 bytes have consumed by the system, an update message is sent for quota. This counter gives the number of updates sent because of threshold.
QHT	Total number of credit control updates sent due to expiry of Quota Hold Timer (QHT).
Final	Total number of credit control updates sent due to expiry of final unit of quota.
Quota Exhausted	Total number of credit control updates sent due to subscriber quota getting exhausted.
Validity Time	Total number of credit control updates sent because of the session validity time expired.
Other Quota	Total number of credit control updates sent due to request for additional quota for subscriber.
Rating Condition Change	Total number of credit control updates sent due to change in RAT/QOS/SGSN/CELLID/LAC.
Forced Reauthorization	Total number of credit control updates sent due to RAR.
TITSU Time	This counter is incremented when the RADIUS online access-request is triggered because the Time Interval after TariffSwitchUpdate expired.
CC Termination Cause Stats	
Diameter Logout	Total number of Credit Control Application session(s) terminated due to subscriber logout.
Service Not Provided	Total number of Credit Control Application session(s) terminated as service was not available.
Bad Answer	Total number of Credit Control Application session(s) terminated due to invalid/unknown response received.

Field	Description
Administrative	The total number of sessions disconnected due to any of the following reasons: - Sessions disconnected when the Administrator issues the <code>clear subscribers all</code> CLI command. - Sessions disconnected by ECS due to any of the following reasons: - Bearer does not contain active rules—when the last bearer has no rules left as part of some PCRF trigger. - Charging-action has the <code>flow action</code> parameter configured as <code>terminate-session</code>. - Sessions disconnected by the Diameter Credit Control Application (DCCA) due to any of the following reasons: - Result code 4010 or 4012 is received at the command level, and for CCR-Initial and CCR-Update Credit Control Failure Handling (CCFH) is configured as Terminate or Retry-and-Terminate. - Result code 5003 or 5030 is received at the command level. - Abort-Session-Request message is received.
Link Broken	Total number of Credit Control Application session(s) terminated due to broken/down link.
Auth Expired	Total number of Credit Control Application session(s) terminated due to authorization of subscriber expired.
User Moved	Total number of Credit Control Application session(s) terminated as subscriber moved out of service area.
Session Timeout	Total number of Credit Control Application session(s) terminated due to timeout.
CCBad Answer Stats	
Auth-Application-Id	Indicates the absence or unexpected value in Auth-Application-Id AVP.
Session-Id	Indicates the absence or unexpected value in Session-Id AVP.
CC-Request-Number	Indicates the absence or unexpected value in CC-Request-Number AVP.
CC-Request-Type	Indicates the absence or unexpected value in CC-Request-Type AVP.
Origin-Host	Indicates the absence of Origin-Host AVP.
Origin-Realm	Indicates the absence of Origin-Realm AVP.
Parse-Message-Errors	Indicates the total number of parse errors in the message.
Parse-Mscc-Errors	Indicates the total number of parse errors in MSCC AVP.
Misc	Indicates the total number of other miscellaneous errors.
CC Traffic Category Stats	
Category Creates	The total traffic categories created.
Category Deletes	The total traffic categories deleted.

Field	Description
Category Lookups	The total traffic categories available.
Hits	The total traffic categories triggered.
Misses	The total traffic categories triggered and missed.
Trigger Events	The total traffic categories triggered.
Final Unit Consumed	The total units consumed by subscriber during session.
Category Success	The total number of successful traffic category sessions.
Rating Failed	The total Rating Groups failed during session.
Service Denied	The total number of services denied during session.
Limit Reached	The total number of events when subscriber reached quota limit.
Auth Rejected	The total number of authorization rejected.
Other Errors	The total number of miscellaneous/unknown errors not specified by system.

show active-charging edr-format all

Table 91. show active-charging edr-format all Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
EDR Format Name	Name of the configured EDR format.
Attribute	Attribute information configured in specific EDR format.
Total edr-format(s) found	The total number of configured existing EDR formats.

show active-charging edr-format statistics

Table 92. show active-charging edr-format statistics Command Output Descriptions

Field	Description
Total edr-formats	The total number of EDR formats configured.
Total edrs generated	The total number of EDRs generated.
Total NAT bind records generated	The total number of Network Address Translation (NAT) bind records generated. This field is only displayed, if configured, in 8.3 and later releases.

show active-charging edr-udr-file flow-control-counters

Table 93. show active-charging edr-udr-file flow-control-counters Command Output Descriptions

Field	Description
Num of Times Flow Control initiated	Total number of times the flow control initiated.
Num of Outstanding Messages	Total number outstanding messages for flow control.
Num of unsent Messages	Total number unsent messages for flow control.
Num of CDR records Discarded due to flow control	Total number of charging detail records (CDRs) discarded due to flow control action.
Last flow control occurrence	Date and time of the last occurrence of flow control action.

show active-charging edr-udr-file statistics

Table 94. show active-charging edr-udr-file statistics Command Output Descriptions

Field	Description
EDR-UDR file Statistics	
CDRMOD Instance Id	The CDRMOD instance identifier.
Overall Statistics	
Files rotated	Total number of EDR and UDR files rotated.
Files rotated due to volume limit	Total number of EDR and UDR files rotated due to volume limit.
Files rotated due to time limit	Total number of EDR and UDR files rotated due to time limit.
Files rotated due to records limit	Total number of files rotated because of record limits.
File rotation failures	Total number of times rotation failed for EDR and UDR file.
Files deleted	Total number of EDR and UDR files deleted.
Records deleted	Total number of records deleted.
Records received	Total number of records received.
Files received	Total number of EDR and UDR files received by service.
Current open files	Total number of EDR and UDR files open.
Time of last file deletion	Date and time of last EDR/UDR file deleted.
EDR Specific Statistics	
EDR files rotated	Total number of EDR files rotated.
EDR files rotated due to volume limit	Total number of EDR files rotated due to volume limit.
EDR files rotated due to time limit	Total number of EDR files rotated due to time limit.
EDR files rotated due to records limit	Total number of EDR files rotated due to records limit
EDR file rotation failures	Total number of rotation failed for EDR file.
EDR files deleted	Total number of EDR files deleted.
EDR records deleted	Total number of EDR records deleted.
EDR records received	Total number of EDR records received.
Current open EDR files	Total number of EDR files open.
Time of last EDR file deletion	Date and time of last EDR file deleted.
UDR Specific Statistics	
UDR files rotated	Total number of UDR files rotated.

Field	Description
UDR files rotated due to volume limit	Total number of UDR files rotated due to volume limit.
UDR files rotated due to time limit	Total number of UDR files rotated due to time limit.
UDR files rotated due to records limit	Total number of UDR files rotated due to records limit.
UDR files rotation failures	Total number of rotation failed for UDR file.
UDR files deleted	Total number of UDR files deleted.
UDR records deleted	Total number of UDR records deleted.
UDR records received	Total number of UDR records received.
Current open UDR files	Total number of UDR files open.
Time of last UDR file deletion	Date and time of last UDR file deletion.
EDR-UDR PUSH Statistics	
Overall Statistics Primary Server Statistics Secondary Server Statistics	
Successful File Transfers	Total number of successful file transfers.
Failed File Transfers	Total number of failed file transfers.
Num of times PUSH initiated	Total number of times an EDR/UDR push attempt was initiated.
Num of times PUSH Failed	Total number of times an EDR/UDR push attempt failed.
Num of times PUSH cancelled due to HD failure	Total number of times EDR/UDR push was cancelled due to hard disk failures.
Num of periodic PUSH	Total number of periodic push.
Num of manual PUSH	Total number of manual push.
Current status of PUSH	Current status of push: Running/Not Running
Last completed PUSH time	The date and time the last push completed.

show active-charging firewall statistics

Table 95. show active-charging firewall statistics Command Output Descriptions

Field	Description
Firewall Statistics for context	Name of the context.
Data Stats:	
Total Packets Received	Total number of packets received by Stateful Firewall.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of uplink packets dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of uplink bytes dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of downlink packets dropped by Stateful Firewall.
Downlink Bytes Dropped	Total number of downlink bytes dropped by Stateful Firewall.
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.

show active-charging firewall statistics nat-realm

Table 96. show active-charging firewall statistics nat-realm Command Output Descriptions

Field	Description
Firewall Statistics for NAT-realm	The NAT realm name for which the statistics are displayed.
Data Stats:	
Total Packets Received	Total number of packets received by the NAT realm.
Total Bytes Received	Total number of bytes received by the NAT realm.
Total Packets Sent	Total number of packets sent by the NAT realm.
Total Bytes Sent	Total number of bytes sent by the NAT realm.
Total Packets Injected	Total number of packets injected by the NAT realm.
Total Bytes Injected	Total number of bytes injected by the NAT realm.
Uplink Packets Dropped	Total number of uplink packets dropped by the NAT realm.
Uplink Bytes Dropped	Total number of uplink bytes dropped by the NAT realm.
Downlink Packets Dropped	Total number of downlink packets dropped by the NAT realm.
Downlink Bytes Dropped	Total number of downlink bytes dropped by the NAT realm.
Total Malformed Packets	Total number of malformed packets detected by the NAT realm.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by the NAT realm.
Total Flows Processed by NAT-realm	Total number of flows processed by the NAT realm.

show active-charging firewall statistics verbose

Table 97. show active-charging firewall statistics verbose Command Output Descriptions

Field	Description
Firewall Statistics for Context	Name of the context.
IP Stats:	
Land Attacks	Total number of Land attacks detected by Stateful Firewall.
Jolt Attacks	Total number of Jolt attacks detected by Stateful Firewall.
Teardrop Attacks	Total number of Teardrop attacks detected by Stateful Firewall.
Zero Length IP Option	Total number of Zero-length IP option attacks detected by Stateful Firewall.
IP Source-router Attacks	Total number of IP Source-router attacks detected by Stateful Firewall.
Packets with IP-Unaligned-Timestamp	Total number of packets with IP unaligned timestamps detected by Stateful Firewall.
Packets with Short IP Header Length	Total number of packets with short IP header length detected by Stateful Firewall.
Packets Dropped due to IP Checksum Errors	Total number of packets dropped due to IP Checksum error.
Downlink Dropped Bytes on IP Reassembly Failure	Total number of downlink bytes dropped on IP Reassembly failure.
Uplink Dropped Bytes on IP Reassembly Failure	Total number of uplink bytes dropped on IP Reassembly failure.
TCP Stats:	
Data Packets Received After RST/FIN	Total number of data packets received after receiving RST (reset) request by Stateful Firewall.
Invalid SEQ Number Received with RST	Total number of invalid sequence-number received with RST (reset) request by Stateful Firewall.
Data without Connection Established	Total number of data packets received before the establishment of connection by Stateful Firewall.
Invalid TCP Connection Requests	Total number of invalid TCP connection requests received by Stateful Firewall.
Invalid TCP pre-connection Requests	Total number of invalid TCP pre-connection requests received by Stateful Firewall.
Invalid ACK Value (Cookie Enabled)	Total number of invalid ACK values (to enable cookies) received by Stateful Firewall.
Invalid TCP Packet Length	Total number of TCP packets with invalid length received by Stateful Firewall.

Field	Description
Packets with Short TCP Header Length	Total number of TCP packets with invalid/short header length received by Stateful Firewall.
Packets Dropped due to TCP Checksum Errors	Total number of packets dropped due to TCP Checksum error.
Packets with SEQ/ACK Out-of-range	Total number of packets with out of range SEQ/ACK.
TCP Null Scan Attacks	Total number of TCP Null Scan attacks detected by Stateful Firewall.
Post Connection SYN	Total number of Post Connection SYN attacks detected by Stateful Firewall.
Unable to Send SYN Packet	Total number of attempts detected by Stateful Firewall when node failed to send SYN packets.
Send Final ACK to Target Failed	Total number of attempts detected by Stateful Firewall when node failed to send Final ACK packet to target node.
Invalid TCP Packet: SYN-ACK Expected	Total number of invalid TCP packets received by Stateful Firewall in place of SYN+ACK packets.
No TCP Flags Set	Total number of TCP packets received with no flags set.
All TCP Flags Set	Total number of TCP flags received with all flags set.
Invalid TCP Packets	Total number of invalid TCP packets including all type of errors and attacks received by Stateful Firewall.
Flows Closed by RST before 3-Way Handshake	Total number flows closed by RST (reset) message before the 3-way handshaking.
Flows Timed-out in SYN_RCVD1 State	Total number of flows timed out in SYN_RCVD1 state.
Flows Timed-out in SYN_RCVD2 State	Total number of flows timed out in SYN_RCVD2 state.
Flows Terminated due to WinNuke Attack	Total number of flows terminated due to WinNuke attacks by Stateful Firewall.
TCP-SYN Flood Attacks	Total number of TCP-SYN Flood attacks detected by Stateful Firewall.
Packets Dropped on TCP-SYN Flood Attack	Total number of packets dropped by Stateful Firewall in TCP-SYN Flood attacks.
FTP-Bounce Attacks	Total number of FTP-Bounce attacks detected by Stateful Firewall.
Mime-Flood Attacks	Total number of Mime-Flood attacks detected by Stateful Firewall.
Proxy Handshakes Completed	Total number of times proxy handshake was completed.
Packets Dropped due to source port zero	Total number of packets dropped due to source port zero error.
SYN Packets Dropped due to ECE/CWR Set	Total number of SYN packets dropped due to ECE/CWR Flags Set.
UDP Stats:	
Invalid UDP Echo Response	Total number of invalid UDP echo responses.
Invalid UDP Packet Length	Total number of invalid UDP packet length.
Packets Dropped due to UDP Checksum Errors	Total number of packets dropped due to UDP Checksum errors.
Packets with Short UDP Header Length	Total number of packets with short UDP header length.

Field	Description
Packets Dropped on UDP Flood Attack	Total number of packets dropped by Stateful Firewall in UDP flood attacks.
Packets Dropped due to exceeding ICMP dest unreachable threshold	Total number of packets dropped due to exceeding ICMP destination unreachable threshold.
ICMP Stats:	
Invalid ICMP Response	Total number of invalid ICMP responses.
ICMP Reply Error	Total number of ICMP reply errors.
Invalid ICMP Type Packet	Total number of invalid ICMP type packets.
ICMP Error Message Replay Attacks	Total number of ICMP error message replay attacks detected by Stateful Firewall.
ICMP Packets with Duplicate Sequence Number	Total number of ICMP packets with duplicate sequence numbers.
Packets with Short ICMP Header Length	Total number of packets with short ICMP header length.
Invalid ICMP Packet Length	Total number of packets with invalid ICMP packet length.
Packets Dropped on ICMP Flood Attack	Total number of packets dropped by Stateful Firewall in ICMP flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMP Checksum Errors	Total number of packets dropped due to ICMP Checksum error.
ICMP Packets With Destination Unreachable Message	Total number of ICMP packets with destination unreachable message.
ICMP Echo Packets Dropped due to ID Zero	Total number of ICMP echo packets dropped due to zero ID.
ICMPv6 Stats:	
Invalid ICMPv6 Response	Total number of invalid ICMPv6 responses.
ICMPv6 Reply Error	Total number of ICMPv6 reply errors.
Invalid ICMPv6 Type Packet	Total number of invalid ICMPv6 type packets.
ICMPv6 Error Message Replay Attacks	Total number of ICMPv6 error message replay attacks detected by Stateful Firewall.
ICMPv6 Packets with Duplicate Sequence Number	Total number of ICMPv6 packets with duplicate sequence numbers.
Packets with Short ICMPv6 Header Length	Total number of packets with short ICMPv6 header length.
Invalid ICMPv6 Packet Length	Total number of packets with invalid ICMPv6 packet length.
Packets Dropped on ICMPv6 Flood Attack	Total number of packets dropped by Stateful Firewall in ICMPv6 flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMPv6 Checksum Errors	Total number of packets dropped due to ICMPv6 Checksum error.
ICMPv6 Packets With Destination Unreachable Message	Total number of ICMPv6 packets with destination unreachable message.

Field	Description
ICMPv6 Echo Packets Dropped due to ID Zero	Total number of ICMPv6 echo packets dropped due to zero ID.
IPv6 Stats:	
Land Attacks	Total number of land attacks detected by Stateful Firewall.
Jolt Attacks	Total number of jolt attacks detected by Stateful Firewall.
Teardrop Attacks	Total number of teardrop attacks detected by Stateful Firewall.
Invalid IP Option Length	Total number of packets with invalid IP option length.
IPv6 Source-router Attacks	Total number of IPv6 source-router attacks detected by Stateful Firewall.
Packets with Short IPv6 Header Length	Total number of packets with short IPv6 header length detected by Stateful Firewall.
Packets with Nested Fragmentation Header	Total number of packets with nested fragmentation header.
Packets with Unspecified IPv6 Address	Total number of packets with unspecified IPv6 address.
Packets with invalid Payload Length	Total number of packets with invalid payload length.
Packets with more than threshold Extension Headers	Total number of packets with more than threshold extension headers.
Packets with invalid Hop By Hop Extension Header	Total number of packets with invalid hop by hop extension header.
Packets with ICMPv4 in IPv6 Header	Total number of packets with ICMPv4 in IPv6 header.
Packets with invalid Destination Extension Header	Total number of packets with invalid destination extension header.
Downlink Dropped Bytes on IPv6 Reassembly Failure	Total number of downlink bytes dropped on IPv6 Reassembly failure.
Uplink Dropped Bytes on IPv6 Reassembly Failure	Total number of uplink bytes dropped on IPv6 Reassembly failure.
General Stats:	
Packets without Any Data Received	Total number of packets received without any data.
No Matching Uplink Ruledef	Total number of uplink packets with no matching ruledef.
No Matching Downlink Ruledef	Total number of downlink packets with no matching ruledef.
Deny Ruledef Matched	Total number of times deny ruledef was matched.
Packets Dropped due to No Ruledef in Rulebase	Total number of packets dropped due to no ruledef in rulebase.
Packets Dropped due to Miscellaneous Errors	Total number of packets dropped due to miscellaneous errors.
Flows Timed-out	Total number of flows that timed out.
Flows Not Established from External Network	Total number of flows from external networks that were not established.
Max Flows Limit Reached	Total number of times the maximum flows limit was reached.
ALG statistics:	

Field	Description
Packets dropped by SIP ALG	Total number of packets dropped by SIP ALG.
Packets injected by SIP ALG	Total number of packets injected by SIP ALG.
Data Stats:	
Total Packets Received	Total number of packets received in uplink and downlink flows.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of packets in uplink flow dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of bytes in uplink flow dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of packets in downlink flow dropped by Stateful Firewall.
Downlink Bytes Dropped	Total number of bytes in downlink flow dropped by Stateful Firewall.
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.
Total NAT Flows Processed by Firewall	Total number of NAT flows processed by Stateful Firewall.

show active-charging firewall statistics protocol icmp verbose

Table 98. show active-charging firewall statistics protocol icmp verbose Command Output Descriptions

Field	Description
Firewall Statistics for Protocol: ICMP	
ICMP Stats	
Invalid ICMP Response	Total number of invalid ICMP responses.
ICMP Reply Error	Total number of ICMP reply errors.
Invalid ICMP Type Packet	Total number of invalid ICMP type packets.
ICMP Error Message Replay Attacks	Total number of ICMP error message replay attacks detected by Stateful Firewall.
ICMP Packets with Duplicate Sequence Number	Total number of ICMP packets with duplicate sequence numbers.
Packets with Short ICMP Header Length	Total number of packets with short ICMP header length.
Invalid ICMP Packet Length	Total number of packets with invalid ICMP packet length.
Packets Dropped on ICMP Flood Attack	Total number of packets dropped by Stateful Firewall in ICMP flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMP Checksum Errors	Total number of packets dropped due to ICMP Checksum error.
ICMP Packets With Destination Unreachable Message	Total number of ICMP packets with destination unreachable message.
ICMP Echo Packets Dropped due to ID Zero	Total number of ICMP echo packets dropped due to zero ID.
Data Stats	
Total Packets Received	Total number of packets received in uplink and downlink flows.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of packets in uplink flow dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of bytes in uplink flow dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of packets in downlink flow dropped by Stateful Firewall.
Downlink Bytes Dropped	Total number of bytes in downlink flow dropped by Stateful Firewall.

Field	Description
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.
Total NAT Flows Processed by Firewall	Total number of NAT flows processed by Stateful Firewall.

show active-charging firewall statistics protocol icmpv6 verbose

Table 99. show active-charging firewall statistics protocol icmpv6 verbose Command Output Descriptions

Field	Description
Firewall Statistics for Protocol: ICMPv6	
ICMPv6 Stats	
Invalid ICMPv6 Response	Total number of invalid ICMPv6 responses.
ICMPv6 Reply Error	Total number of ICMPv6 reply errors.
Invalid ICMPv6 Type Packet	Total number of invalid ICMPv6 type packets.
ICMPv6 ErrorMessage Replay Attacks	Total number of ICMPv6 error message replay attacks detected by Stateful Firewall.
ICMPv6 Packets with Duplicate Sequence Number	Total number of ICMPv6 packets with duplicate sequence numbers.
Packets with Short ICMPv6 Header Length	Total number of packets with short ICMPv6 header length.
Invalid ICMPv6 Packet Length	Total number of packets with invalid ICMPv6 packet length.
Packets Dropped on ICMPv6 Flood Attack	Total number of packets dropped by Stateful Firewall in ICMPv6 flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMPv6 Checksum Errors	Total number of packets dropped due to ICMPv6 Checksum error.
ICMPv6 Packets With Destination Unreachable Message	Total number of ICMPv6 packets with destination unreachable message.
ICMPv6 Echo Packets Dropped due to ID Zero	Total number of ICMPv6 echo packets dropped due to zero ID.
Data Stats	
Total Packets Received	Total number of packets received in uplink and downlink flows.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of packets in uplink flow dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of bytes in uplink flow dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of packets in downlink flow dropped by Stateful Firewall.

Field	Description
Downlink Bytes Dropped	Total number of bytes in downlink flow dropped by Stateful Firewall.
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.
Total NAT Flows Processed by Firewall	Total number of NAT flows processed by Stateful Firewall.

show active-charging firewall statistics protocol ip verbose

Table 100. show active-charging firewall statistics protocol ip verbose Command Output Descriptions

Field	Description
Firewall Statistics for Protocol IP in Context	Name of the context.
IP Stats:	
Land Attacks	Total number of Land attacks detected.
Jolt Attacks	Total number of Jolt attacks detected.
Teardrop Attacks	Total number of Teardrop attacks detected.
Zero Length IP Option	Total number of Zero-length IP Option attacks detected.
IP Source-router Attacks	Total number of IP Source-router attacks detected.
Packets with IP-Unaligned-Timestamp	Total number of packets with IP-Unaligned-Timestamp.
Packets with Short IP Header Length	Total number of packets with short IP header length.
Packets Dropped due to IP Checksum Errors	Total number of packets dropped due to checksum errors.
Downlink Dropped Bytes on IP Reassembly Failure	Total number of bytes dropped in downlink flow on IP Reassembly failure.
Uplink Dropped Bytes on IP Reassembly Failure	Total number of bytes dropped in uplink flow on IP Reassembly failure.
Data Stats:	
Total Packets Received	Total number of packets received by Stateful Firewall.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of uplink packets dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of uplink bytes dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of downlink packets dropped by Stateful Firewall.
Downlink Bytes Dropped	Total number of downlink bytes dropped by Stateful Firewall.
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.

show active-charging firewall statistics protocol ipv6 verbose

Table 101.show active-charging firewall statistics protocol ipv6 verbose Command Output Descriptions

Field	Description
Firewall Statistics for Protocol: IPv6	
IPv6 Stats	
Land Attacks	Total number of land attacks detected by Stateful Firewall.
Jolt Attacks	Total number of jolt attacks detected by Stateful Firewall.
Teardrop Attacks	Total number of teardrop attacks detected by Stateful Firewall.
Invalid IP Option Length	Total number of packets with invalid IP option length.
IPv6 Source-router Attacks	Total number of IPv6 source-router attacks detected by Stateful Firewall.
Packets with Short IPv6 Header Length	Total number of packets with short IPv6 header length.
Packets with Nested Fragmentation Header	Total number of packets with nested fragmentation header.
Packets with Unspecified IPv6 Address	Total number of packets with unspecified IPv6 address.
Packets with invalid Payload Length	Total number of packets with invalid payload length.
Packets with more than threshold Extension Headers	Total number of packets with more than threshold extension headers.
Packets with invalid Hop By Hop Extension Header	Total number of packets with invalid hop by hop extension header.
Packets with ICMPv4 in IPv6 Header	Total number of packets with ICMPv4 in IPv6 header.
Packets with invalid Destination Extension Header	Total number of packets with invalid destination extension header.
Downlink Dropped Bytes on IPv6 Reassembly Failure	Total number of downlink bytes dropped due to reassembly failure.
Uplink Dropped Bytes on IPv6 Reassembly Failure	Total number of uplink bytes dropped due to reassembly failure.
Data Stats	
Total Packets Received	Total number of packets received in uplink and downlink flows.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of packets in uplink flow dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of bytes in uplink flow dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of packets in downlink flow dropped by Stateful Firewall.

■ show active-charging firewall statistics protocol ipv6 verbose

Field	Description
Downlink Bytes Dropped	Total number of bytes in downlink flow dropped by Stateful Firewall.
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.
Total NAT Flows Processed by Firewall	Total number of NAT flows processed by Stateful Firewall.

show active-charging firewall statistics protocol udp verbose

Table 102. show active-charging firewall statistics protocol udp verbose Command Output Descriptions

Field	Description
Firewall Statistics for Protocol: UDP	
UDP Stats	
Invalid UDP Echo Response	Total number of invalid UDP echo responses.
Invalid UDP Packet Length	Total number of invalid UDP packet length.
Packets Dropped due to UDP Checksum Errors	Total number of packets dropped due to UDP Checksum errors.
Packets with Short UDP Header Length	Total number of packets with short UDP header length.
Packets Dropped on UDP Flood Attack	Total number of packets dropped by Stateful Firewall in UDP flood attacks.
Packets Dropped due to exceeding ICMP dest unreachable threshold	Total number of packets dropped due to exceeding ICMP destination unreachable threshold.
Data Stats	
Total Packets Received	Total number of packets received in uplink and downlink flows.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of packets in uplink flow dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of bytes in uplink flow dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of packets in downlink flow dropped by Stateful Firewall.
Downlink Bytes Dropped	Total number of bytes in downlink flow dropped by Stateful Firewall.
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.

show active-charging firewall statistics callid <call_id> verbose

Table 103. show active-charging firewall statistics callid <call_id> verbose Command Output Descriptions

Field	Description
Firewall Statistics for Callid: <call_id>	
IP Stats:	
Land Attacks	Total number of Land attacks detected by Stateful Firewall.
Jolt Attacks	Total number of Jolt attacks detected by Stateful Firewall.
Teardrop Attacks	Total number of Teardrop attacks detected by Stateful Firewall.
Invalid IP Option Length	Total number of Invalid IP Option Length attacks detected by Stateful Firewall.
IP Source-router Attacks	Total number of IP Source-router attacks detected by Stateful Firewall.
Packets with IP-Unaligned-Timestamp	Total number of packets with IP unaligned timestamps detected by Stateful Firewall.
Packets with Short IP Header Length	Total number of packets with short IP header length detected by Stateful Firewall.
Packets Dropped due to IP Checksum Errors	Total number of packets dropped due to IP Checksum error.
Downlink Dropped Bytes on IP Reassembly Failure	Total number of downlink bytes dropped on IP Reassembly failure.
Uplink Dropped Bytes on IP Reassembly Failure	Total number of uplink bytes dropped on IP Reassembly failure.
TCP Stats:	
Data Packets Received After RST/FIN	Total number of datapackets received after receiving RST (reset) request by Stateful Firewall.
Invalid SEQ Number Received with RST	Total number of invalid sequence-number received with RST (reset) request by Stateful Firewall.
Data without Connection Established	Total number of datapackets received before the establishment of connection by Stateful Firewall.
Invalid TCP Connection Requests	Total number of invalid TCP connection requests received by Stateful Firewall.
Invalid TCP pre-connection Requests	Total number of invalid TCP pre-connection requests received by Stateful Firewall.
Invalid ACK Value (Cookie Enabled)	Total number of invalid ACK values (to enable cookies) received by Stateful Firewall.
Invalid TCP Packet Length	Total number of TCP packets with invalid length received by Stateful Firewall.

Field	Description
Packets with Short TCP Header Length	Total number of TCP packets with invalid/short header length received by Stateful Firewall.
Packets Dropped due to TCP Checksum Errors	Total number of packets dropped due to TCP Checksum error.
Packets with SEQ/ACK Out-of-range	Total number of packets with out of range SEQ/ACK.
TCP Null Scan Attacks	Total number of TCP Null Scan attacks detected by Stateful Firewall.
Post Connection SYN	Total number of Post Connection SYN attacks detected by Stateful Firewall.
Unable to Send SYN Packet	Total number of attempts detected by Stateful Firewall when node failed to send SYN packets.
Send Final ACK to Target Failed	Total number of attempts detected by Stateful Firewall when node failed to send Final ACK packet to target node.
Invalid TCP Packet: SYN-ACK Expected	Total number of invalid TCP packets received by Stateful Firewall in place of SYN+ACK packets.
No TCP Flags Set	Total number of TCP packets received with no flags set.
All TCP Flags Set	Total number of TCP flags received with all flags set.
Invalid TCP Packets	Total number of invalid TCP packets including all type of errors and attacks received by Stateful Firewall.
Flows Closed by RST before 3-Way Handshake	Total number flows closed by RST (reset) message before the 3-way handshaking.
Flows Timed-out in SYN_RCVD1 State	Total number of flows timed out in SYN_RCVD1 state.
Flows Timed-out in SYN_RCVD2 State	Total number of flows timed out in SYN_RCVD2 state.
Flows Terminated due to WinNuke Attack	Total number of flows terminated due to WinNuke attacks by Stateful Firewall.
TCP-SYN Flood Attacks	Total number of TCP-SYN Flood attacks detected by Stateful Firewall.
Packets Dropped on TCP-SYN Flood Attack	Total number of packets dropped by Stateful Firewall in TCP-SYN Flood attacks.
FTP-Bounce Attacks	Total number of FTP-Bounce attacks detected by Stateful Firewall.
Mime-Flood Attacks	Total number of Mime-Flood attacks detected by Stateful Firewall.
Proxy Handshakes Completed	Total number of times proxy handshake was completed.
Packets Dropped during Proxy Handshake	Total number of packets dropped during proxy handshake.
UDP Stats:	
Invalid UDP Echo Response	Total number of invalid UDP echo responses.
Invalid UDP Packet Length	Total number of invalid UDP packet length.
Packets Dropped due to UDP Checksum Errors	Total number of packets dropped due to UDP Checksum errors.
Packets with Short UDP Header Length	Total number of packets with short UDP header length.
Packets Dropped on UDP Flood Attack	Total number of packets dropped by Stateful Firewall in UDP flood attacks.

■ show active-charging firewall statistics callid <call_id> verbose

Field	Description
Packets Dropped due to exceeding ICMP dest unreachable threshold	Total number of packets dropped due to exceeding ICMP destination unreachable threshold.
ICMP Stats:	
Invalid ICMP Response	Total number of invalid ICMP responses.
ICMP Reply Error	Total number of ICMP reply errors.
Invalid ICMP Type Packet	Total number of invalid ICMP type packets.
ICMP Error Message Replay Attacks	Total number of ICMP error message replay attacks detected by Stateful Firewall.
ICMP Packets with Duplicate Sequence Number	Total number of ICMP packets with duplicate sequence numbers.
Packets with Short ICMP Header Length	Total number of packets with short ICMP header length.
Invalid ICMP Packet Length	Total number of packets with invalid ICMP packet length.
Packets Dropped on ICMP Flood Attack	Total number of packets dropped by Stateful Firewall in ICMP flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMP Checksum Errors	Total number of packets dropped due to ICMP Checksum errors.
ICMP Packets With Destination Unreachable Message	Total number of ICMP packets with Destination Unreachable Message.
ICMP Echo Packets Dropped due to ID Zero	Total number of ICMP echo packets dropped due to zero ID.
ICMPv6 Stats:	
Invalid ICMPv6 Response	Total number of invalid ICMPv6 responses.
ICMPv6 Reply Error	Total number of ICMPv6 reply errors.
Invalid ICMPv6 Type Packet	Total number of invalid ICMPv6 type packets.
ICMPv6 Error Message Replay Attacks	Total number of ICMPv6 error message replay attacks detected by Stateful Firewall.
ICMPv6 Packets with Duplicate Sequence Number	Total number of ICMPv6 packets with duplicate sequence numbers.
Packets with Short ICMPv6 Header Length	Total number of packets with short ICMPv6 header length.
Invalid ICMPv6 Packet Length	Total number of packets with invalid ICMPv6 packet length.
Packets Dropped on ICMPv6 Flood Attack	Total number of packets dropped by Stateful Firewall in ICMPv6 flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMPv6 Checksum Errors	Total number of packets dropped due to ICMPv6 Checksum errors.
ICMPv6 Packets With Destination Unreachable Message	Total number of ICMPv6 packets with Destination Unreachable Message.
ICMPv6 Echo Packets Dropped due to ID Zero	Total number of ICMPv6 echo packets dropped due to zero ID.

Field	Description
General Stats:	
Packets without Any Data Received	Total number of packets received without any data.
No Matching Uplink Ruledef	Total number of uplink packets with no matching ruledef.
No Matching Downlink Ruledef	Total number of downlink packets with no matching ruledef.
Deny Ruledef Matched	Total number of times deny ruledef was matched.
Packets Dropped due to No Ruledef in Rulebase	Total number of packets dropped due to no ruledef in rulebase.
Packets Dropped due to Miscellaneous Errors	Total number of packets dropped due to miscellaneous errors.
Flows Timed-out	Total number of flows that timed out.
Flows Not Established from External Network	Total number of flows from external networks that were not established.
Max Flows Limit Reached	Total number of times the maximum flows limit was reached.
IP Retransmitted Packets Dropped	Total number of IP retransmitted packets dropped.
Data Stats:	
Total Packets Received	Total number of packets received in uplink and downlink flows.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of packets in uplink flow dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of bytes in uplink flow dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of packets in downlink flow dropped by Stateful Firewall.
Downlink Bytes Dropped	Total number of bytes in downlink flow dropped by Stateful Firewall.
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.

■ show active-charging firewall statistics domainname <domain_name> verbose

show active-charging firewall statistics domainname <domain_name> verbose

Table 104. show active-charging firewall statistics domainname <domain_name> verbose Command Output Descriptions

Field	Description
Firewall Statistics for 2 Sessions with Domain-name: <domain_name>	
IP Stats:	
Land Attacks	Total number of Land attacks detected by Stateful Firewall.
Jolt Attacks	Total number of Jolt attacks detected by Stateful Firewall.
Teardrop Attacks	Total number of Teardrop attacks detected by Stateful Firewall.
Invalid IP Option Length	Total number of Invalid IP Option Length attacks detected by Stateful Firewall.
IP Source-router Attacks	Total number of IP Source-router attacks detected by Stateful Firewall.
Packets with IP-Unaligned-Timestamp	Total number of packets with IP unaligned timestamps detected by Stateful Firewall.
Packets with Short IP Header Length	Total number of packets with short IP header length detected by Stateful Firewall.
Packets Dropped due to IP Checksum Errors	Total number of packets dropped due to IP Checksum error.
Downlink Dropped Bytes on IP Reassembly Failure	Total number of downlink bytes dropped on IP Reassembly failure.
Uplink Dropped Bytes on IP Reassembly Failure	Total number of uplink bytes dropped on IP Reassembly failure.
TCP Stats:	
Data Packets Received After RST/FIN	Total number of data packets received after receiving RST (reset) request by Stateful Firewall.
Invalid SEQ Number Received with RST	Total number of invalid sequence-number received with RST (reset) request by Stateful Firewall.
Data without Connection Established	Total number of data packets received before the establishment of connection by Stateful Firewall.
Invalid TCP Connection Requests	Total number of invalid TCP connection requests received by Stateful Firewall.
Invalid TCP pre-connection Requests	Total number of invalid TCP pre-connection requests received by Stateful Firewall.
Invalid ACK Value (Cookie Enabled)	Total number of invalid ACK values (to enable cookies) received by Stateful Firewall.

Field	Description
Invalid TCP Packet Length	Total number of TCP packets with invalid length received by Stateful Firewall.
Packets with Short TCP Header Length	Total number of TCP packets with invalid/short header length received by Stateful Firewall.
Packets Dropped due to TCP Checksum Errors	Total number of packets dropped due to TCP Checksum error.
Packets with SEQ/ACK Out-of-range	Total number of packets with out of range SEQ/ACK.
TCP Null Scan Attacks	Total number of TCP Null Scan attacks detected by Stateful Firewall.
Post Connection SYN	Total number of Post Connection SYN attacks detected by Stateful Firewall.
Unable to Send SYN Packet	Total number of attempts detected by Stateful Firewall when node failed to send SYN packets.
Send Final ACK to Target Failed	Total number of attempts detected by Stateful Firewall when node failed to send Final ACK packet to target node.
Invalid TCP Packet: SYN-ACK Expected	Total number of invalid TCP packets received by Stateful Firewall in place of SYN+ACK packets.
No TCP Flags Set	Total number of TCP packets received with no flags set.
All TCP Flags Set	Total number of TCP flags received with all flags set.
Invalid TCP Packets	Total number of invalid TCP packets including all type of errors and attacks received by Stateful Firewall.
Flows Closed by RST before 3-Way Handshake	Total number flows closed by RST (reset) message before the 3-way handshaking.
Flows Timed-out in SYN_RCVD1 State	Total number of flows timed out in SYN_RCVD1 state.
Flows Timed-out in SYN_RCVD2 State	Total number of flows timed out in SYN_RCVD2 state.
Flows Terminated due to WinNuke Attack	Total number of flows terminated due to WinNuke attacks by Stateful Firewall.
TCP-SYN Flood Attacks	Total number of TCP-SYN Flood attacks detected by Stateful Firewall.
Packets Dropped on TCP-SYN Flood Attack	Total number of packets dropped by Stateful Firewall in TCP-SYN Flood attacks.
FTP-Bounce Attacks	Total number of FTP-Bounce attacks detected by Stateful Firewall.
Mime-Flood Attacks	Total number of Mime-Flood attacks detected by Stateful Firewall.
Proxy Handshakes Completed	Total number of times proxy handshake was completed.
Packets Dropped during Proxy Handshake	Total number of packets dropped during proxy handshake.
UDP Stats:	
Invalid UDP Echo Response	Total number of invalid UDP echo responses.
Invalid UDP Packet Length	Total number of invalid UDP packet length.
Packets Dropped due to UDP Checksum Errors	Total number of packets dropped due to UDP Checksum errors.
Packets with Short UDP Header Length	Total number of packets with short UDP header length.

■ show active-charging firewall statistics domainname <domain_name> verbose

Field	Description
Packets Dropped on UDP Flood Attack	Total number of packets dropped by Stateful Firewall in UDP flood attacks.
Packets Dropped due to exceeding ICMP dest unreachable threshold	Total number of packets dropped due to exceeding ICMP destination unreachable threshold.
ICMP Stats:	
Invalid ICMP Response	Total number of invalid ICMP responses.
ICMP Reply Error	Total number of ICMP reply errors.
Invalid ICMP Type Packet	Total number of invalid ICMP type packets.
ICMP Error Message Replay Attacks	Total number of ICMP error message replay attacks detected by Stateful Firewall.
ICMP Packets with Duplicate Sequence Number	Total number of ICMP packets with duplicate sequence numbers.
Packets with Short ICMP Header Length	Total number of packets with short ICMP header length.
Invalid ICMP Packet Length	Total number of packets with invalid ICMP packet length.
Packets Dropped on ICMP Flood Attack	Total number of packets dropped by Stateful Firewall in ICMP flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMP Checksum Errors	Total number of packets dropped due to ICMP Checksum errors.
ICMP Packets With Destination Unreachable Message	Total number of ICMP packets with Destination Unreachable Message.
ICMP Echo Packets Dropped due to ID Zero	Total number of ICMP echo packets dropped due to zero ID.
ICMPv6 Stats:	
Invalid ICMPv6 Response	Total number of invalid ICMPv6 responses.
ICMPv6 Reply Error	Total number of ICMPv6 reply errors.
Invalid ICMPv6 Type Packet	Total number of invalid ICMPv6 type packets.
ICMPv6 Error Message Replay Attacks	Total number of ICMPv6 error message replay attacks detected by Stateful Firewall.
ICMPv6 Packets with Duplicate Sequence Number	Total number of ICMPv6 packets with duplicate sequence numbers.
Packets with Short ICMPv6 Header Length	Total number of packets with short ICMPv6 header length.
Invalid ICMPv6 Packet Length	Total number of packets with invalid ICMPv6 packet length.
Packets Dropped on ICMPv6 Flood Attack	Total number of packets dropped by Stateful Firewall in ICMPv6 flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMPv6 Checksum Errors	Total number of packets dropped due to ICMPv6 Checksum errors.
ICMPv6 Packets With Destination Unreachable Message	Total number of ICMPv6 packets with Destination Unreachable Message.

Field	Description
ICMPv6 Echo Packets Dropped due to ID Zero	Total number of ICMPv6 echo packets dropped due to zero ID.
General Stats:	
Packets without Any Data Received	Total number of packets received without any data.
No Matching Uplink Ruledef	Total number of uplink packets with no matching ruledef.
No Matching Downlink Ruledef	Total number of downlink packets with no matching ruledef.
Deny RuledefMatched	Total number of times deny ruledef was matched.
Packets Dropped due to No Ruledef in Rulebase	Total number of packets dropped due to no ruledef in rulebase.
Packets Dropped due to Miscellaneous Errors	Total number of packets dropped due to miscellaneous errors.
Flows Timed-out	Total number of flows that timed out.
Flows Not Established from External Network	Total number of flows from external networks that were not established.
Max Flows Limit Reached	Total number of times the maximum flows limit was reached.
IP Retransmitted Packets Dropped	Total number of IP retransmitted packets dropped.
Data Stats:	
Total Packets Received	Total number of packets received in uplink and downlink flows.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of packets in uplink flow dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of bytes in uplink flow dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of packets in downlink flow dropped by Stateful Firewall.
Downlink Bytes Dropped	Total number of bytes in downlink flow dropped by Stateful Firewall.
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.

show active-charging firewall statistics username <user_name> verbose

Table 105. show active-charging firewall statistics username <user_name> verbose Command Output Descriptions

Field	Description
Firewall Statistics for Username: <user_name>	
IP Stats:	
Land Attacks	Total number of Land attacks detected by Stateful Firewall.
Jolt Attacks	Total number of Jolt attacks detected by Stateful Firewall.
Teardrop Attacks	Total number of Teardrop attacks detected by Stateful Firewall.
Invalid IP Option Length	Total number of Invalid IP Option Length attacks detected by Stateful Firewall.
IP Source-router Attacks	Total number of IP Source-router attacks detected by Stateful Firewall.
Packets with IP-Unaligned-Timestamp	Total number of packets with IP unaligned timestamps detected by Stateful Firewall.
Packets with Short IP Header Length	Total number of packets with short IP header length detected by Stateful Firewall.
Packets Dropped due to IP Checksum Errors	Total number of packets dropped due to IP Checksum error.
Downlink Dropped Bytes on IP Reassembly Failure	Total number of downlink bytes dropped on IP Reassembly failure.
Uplink Dropped Bytes on IP Reassembly Failure	Total number of uplink bytes dropped on IP Reassembly failure.
TCP Stats:	
Data Packets Received After RST/FIN	Total number of data packets received after receiving RST (reset) request by Stateful Firewall.
Invalid SEQ Number Received with RST	Total number of invalid sequence-number received with RST (reset) request by Stateful Firewall.
Data without Connection Established	Total number of data packets received before the establishment of connection by Stateful Firewall.
Invalid TCP Connection Requests	Total number of invalid TCP connection requests received by Stateful Firewall.
Invalid TCP pre-connection Requests	Total number of invalid TCP pre-connection requests received by Stateful Firewall.
Invalid ACK Value (Cookie Enabled)	Total number of invalid ACK values (to enable cookies) received by Stateful Firewall.

Field	Description
Invalid TCP Packet Length	Total number of TCP packets with invalid length received by Stateful Firewall.
Packets with Short TCP Header Length	Total number of TCP packets with invalid/short header length received by Stateful Firewall.
Packets Dropped due to TCP Checksum Errors	Total number of packets dropped due to TCP Checksum error.
Packets with SEQ/ACK Out-of-range	Total number of packets with out of range SEQ/ACK.
TCP Null Scan Attacks	Total number of TCP Null Scan attacks detected by Stateful Firewall.
Post Connection SYN	Total number of Post Connection SYN attacks detected by Stateful Firewall.
Unable to Send SYN Packet	Total number of attempts detected by Stateful Firewall when node failed to send SYN packets.
Send Final ACK to Target Failed	Total number of attempts detected by Stateful Firewall when node failed to send Final ACK packet to target node.
Invalid TCP Packet: SYN-ACK Expected	Total number of invalid TCP packets received by Stateful Firewall in place of SYN+ACK packets.
No TCP Flags Set	Total number of TCP packets received with no flags set.
All TCP Flags Set	Total number of TCP flags received with all flags set.
Invalid TCP Packets	Total number of invalid TCP packets including all type of errors and attacks received by Stateful Firewall.
Flows Closed by RST before 3-Way Handshake	Total number flows closed by RST (reset) message before the 3-way handshaking.
Flows Timed-out in SYN_RCVD1 State	Total number of flows timed out in SYN_RCVD1 state.
Flows Timed-out in SYN_RCVD2 State	Total number of flows timed out in SYN_RCVD2 state.
Flows Terminated due to WinNuke Attack	Total number of flows terminated due to WinNuke attacks by Stateful Firewall.
TCP-SYN Flood Attacks	Total number of TCP-SYN Flood attacks detected by Stateful Firewall.
Packets Dropped on TCP-SYN Flood Attack	Total number of packets dropped by Stateful Firewall in TCP-SYN Flood attacks.
FTP-Bounce Attacks	Total number of FTP-Bounce attacks detected by Stateful Firewall.
Mime-Flood Attacks	Total number of Mime-Flood attacks detected by Stateful Firewall.
Proxy Handshakes Completed	Total number of times proxy handshake was completed.
Packets Dropped during Proxy Handshake	Total number of packets dropped during proxy handshake.
UDP Stats:	
Invalid UDP Echo Response	Total number of invalid UDP echo responses.
Invalid UDP Packet Length	Total number of invalid UDP packet length.
Packets Dropped due to UDP Checksum Errors	Total number of packets dropped due to UDP Checksum errors.
Packets with Short UDP Header Length	Total number of packets with short UDP header length.

■ show active-charging firewall statistics username <user_name> verbose

Field	Description
Packets Dropped on UDP Flood Attack	Total number of packets dropped by Stateful Firewall in UDP flood attacks.
Packets Dropped due to exceeding ICMP dest unreachable threshold	Total number of packets dropped due to exceeding ICMP destination unreachable threshold.
ICMP Stats:	
Invalid ICMP Response	Total number of invalid ICMP responses.
ICMP Reply Error	Total number of ICMP reply errors.
Invalid ICMP Type Packet	Total number of invalid ICMP type packets.
ICMP Error Message Replay Attacks	Total number of ICMP error message replay attacks detected by Stateful Firewall.
ICMP Packets with Duplicate Sequence Number	Total number of ICMP packets with duplicate sequence numbers.
Packets with Short ICMP Header Length	Total number of packets with short ICMP header length.
Invalid ICMP Packet Length	Total number of packets with invalid ICMP packet length.
Packets Dropped on ICMP Flood Attack	Total number of packets dropped by Stateful Firewall in ICMP flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMP Checksum Errors	Total number of packets dropped due to ICMP Checksum errors.
ICMP Packets With Destination Unreachable Message	Total number of ICMP packets with Destination Unreachable Message.
ICMP Echo Packets Dropped due to ID Zero	Total number of ICMP echo packets dropped due to zero ID.
ICMPv6 Stats:	
Invalid ICMPv6 Response	Total number of invalid ICMPv6 responses.
ICMPv6 Reply Error	Total number of ICMPv6 reply errors.
Invalid ICMPv6 Type Packet	Total number of invalid ICMPv6 type packets.
ICMPv6 Error Message Replay Attacks	Total number of ICMPv6 error message replay attacks detected by Stateful Firewall.
ICMPv6 Packets with Duplicate Sequence Number	Total number of ICMPv6 packets with duplicate sequence numbers.
Packets with Short ICMP Header Length	Total number of packets with short ICMP header length.
Invalid ICMPv6 Packet Length	Total number of packets with invalid ICMPv6 packet length.
Packets Dropped on ICMPv6 Flood Attack	Total number of packets dropped by Stateful Firewall in ICMPv6 flood attacks.
Ping Of Death Attacks	Total number of Ping-of-Death attacks detected by Stateful Firewall.
Packets Dropped due to ICMPv6 Checksum Errors	Total number of packets dropped due to ICMPv6 Checksum errors.
ICMPv6 Packets With Destination Unreachable Message	Total number of ICMPv6 packets with Destination Unreachable Message.

Field	Description
ICMPv6 Echo Packets Dropped due to ID Zero	Total number of ICMPv6 echo packets dropped due to zero ID.
General Stats:	
Packets without Any Data Received	Total number of packets received without any data.
No Matching Uplink Ruledef	Total number of uplink packets with no matching ruledef.
No Matching Downlink Ruledef	Total number of downlink packets with no matching ruledef.
Deny RuledefMatched	Total number of times deny ruledef was matched.
Packets Dropped due to No Ruledef in Rulebase	Total number of packets dropped due to no ruledef in rulebase.
Packets Dropped due to Miscellaneous Errors	Total number of packets dropped due to miscellaneous errors.
Flows Timed-out	Total number of flows that timed out.
Flows Not Established from External Network	Total number of flows from external networks that were not established.
Max Flows Limit Reached	Total number of times the maximum flows limit was reached.
IP Retransmitted Packets Dropped	Total number of IP retransmitted packets dropped.
Data Stats:	
Total Packets Received	Total number of packets received in uplink and downlink flows.
Total Bytes Received	Total number of bytes received by Stateful Firewall.
Total Packets Sent	Total number of packets sent by Stateful Firewall.
Total Bytes Sent	Total number of bytes sent by Stateful Firewall.
Total Packets Injected	Total number of packets injected by Stateful Firewall.
Total Bytes Injected	Total number of bytes injected by Stateful Firewall.
Uplink Packets Dropped	Total number of packets in uplink flow dropped by Stateful Firewall.
Uplink Bytes Dropped	Total number of bytes in uplink flow dropped by Stateful Firewall.
Downlink Packets Dropped	Total number of packets in downlink flow dropped by Stateful Firewall.
Downlink Bytes Dropped	Total number of bytes in downlink flow dropped by Stateful Firewall.
Total Malformed Packets	Total number of malformed packets detected by Stateful Firewall.
Total DOS Attacks	Total number of Denial-of-Service attacks detected by Stateful Firewall.
Total Flows Processed by Firewall	Total number of flows processed by Stateful Firewall.

show active-charging firewall track-list attacking-servers

Table 106. show active-charging firewall track-list attacking-servers Command Output Descriptions

Field	Description
Attacking Servers:	
Server IP address	IP address of server being tracked for involvement in Denial-of-Service (DOS) attacks.
Time of last attack	Date and time of last attack from the server.
Time of first attack	Date and time of first attack from the server.
Total attacks	Total number of attacks from the server.
Last Attack Type	The last DOS attack type from the server.
Total attacking servers found	Total number of attacking servers found.

show active-charging fw-and-nat policy name

Table 107. show active-charging fw-and-nat policy name Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
Firewall Policy Name	Name of the Firewall-and-NAT Policy.
Firewall Status IPv4	Indicates whether IPv4 Stateful Firewall is enabled or disabled in the Firewall -and-NAT policy.
Firewall Status IPv6	Indicates whether IPv6 Stateful Firewall is enabled or disabled in the Firewall-and-NAT policy.
NAT Status	Indicates whether NAT is enabled or disabled in the Firewall-and-NAT policy.
Firewall and NAT Action Priorities	
RuledefName	Name of the access ruledef.
Type	Indicates the ruledef type. - FD: Firewall Dynamic Ruledef—Predefined and disabled rules that can be enabled/disabled by the policy server. - FS: Firewall Static Ruledef—Predefined and enabled rules that cannot be modified by the policy server. - FSDP: Firewall Static & Dynamic Ruledef—Predefined and enabled rules that can be enabled/disabled by the policy server.
Priority	Priority of the access ruledef in the Firewall-and-NAT policy.
Charging-action/ Fw-and-nat-action	The charging action (C) or the fw-and-nat action (F) configured with the access ruledef.
Port-trigger aux-ports:direction	The auxiliary ports open for traffic, and the direction from which the auxiliary connection is initiated.
NAT-Realm	Name of the NAT realm.
Firewall Configuration	
Dos-Protection	
Source-Route	Indicates status of protection against IP Source Route IP Option attacks.
Win-Nuke	Indicates status of protection against Win Nuke attacks.
Mime-Flood	Indicates status of protection against MIME Flood attacks.
FTP-Bounce	Indicates status of protection against FTP Bounce attacks.
IP-Unaligned-Timestamp	Indicates status of protection against IP Unaligned Timestamp attacks.
TCP-Window-Containment	Indicates status of protection against TCP Window Containment.
Teardrop	Indicates status of protection against Teardrop attacks.

Field	Description
UDP Flooding	Indicates status of protection against UDP Flooding attacks.
ICMP Flooding	Indicates status of protection against ICMP Flooding attacks.
SYN Flooding	Indicates status of protection against SYN Flooding attacks.
Port Scan	Indicates status of protection against Port Scan attacks.
IPv6 Extension Headers Limit	Indicates status of protection against maximum limit of IPv6 extension headers in an IPv6 packet. An IPv6 packet can contain zero or more extension headers.
IPv6 Hop By Hop Options	Indicates status of protection against IPv6 packets containing hop-by-hop extension header options.
Hop By Hop Router Alert Option	Indicates status of protection against IPv6 packets containing router alert hop-by-hop option.
Hop By Hop Jumbo Payload Option	Indicates status of protection against IPv6 packets containing jumbo payload hop-by-hop option.
Invalid Hop By Hop Options	Indicates status of protection against IPv6 packets containing invalid hop-by-hop options.
Unknown Hop By Hop Options	Indicates status of protection against IPv6 packets containing unknown hop-by-hop options.
IPv6 Destination Options	Indicates status of protection against IPv6 packets containing IPv6 destination options header.
Invalid Destination Options	Indicates status of protection against IPv6 packets containing invalid destination options.
Unknown Destination Options	Indicates status of protection against IPv6 packets containing unknown destination options.
IPv6 Nested Fragmentation	Indicates status of protection against IPv6 packets containing IPv6 nested fragmentation.
Max-Packet-Size	
ICMP	For ICMP protocol, the maximum IP packet size (after IP reassembly) allowed over Stateful Firewall.
Non-ICMP	For non-ICMP protocol, the maximum IP packet size (after IP reassembly) allowed over Stateful Firewall.
Flooding	
ICMP limit	The maximum number of ICMP packets allowed during a sampling interval.
UDP limit	The maximum number of UDP packets allowed during a sampling interval.
TCP-SYN limit	The maximum number of TCP-SYN packets allowed during a sampling interval.
Sampling Interval	The flooding sampling interval, in seconds.
TCP-SYN Flood Intercept	

Field	Description
Mode	The TCP SYN flood intercept mode. • none • intercept • watch
Watch-timeout	The TCP intercept watch timeout, in seconds.
Mime-Flood Params	
HTTP Header-Limit	The maximum number of headers allowed in an HTTP packet.
HTTP Max-Header-Field-Size	The maximum header field size allowed in an HTTP header, in bytes.
No Firewall Ruledef Match Action	
Uplink Action	Action configured for uplink packets with no access ruledef matches.
Uplink Charging-Action	Charging action configured for uplink packets with no access ruledef matches.
Uplink NAT-Realm	The NAT-realm to be used if none of the firewall ruledefs are matched for the uplink traffic.
Uplink Fw-and-nat-action	The Fw-and-nat action to be used if none of the firewall ruledefs are matched for the uplink traffic.
Downlink Action	Action configured for downlink packets with no access ruledef matches.
Downlink Charging-Action	Charging action configured for downlink packets with no access ruledef matches.
Downlink NAT-Realm	The NAT-realm to be used if none of the firewall ruledefs are matched for the downlink traffic.
Downlink Fw-and-nat-action	The Fw-and-nat action to be used if none of the firewall ruledefs are matched for the downlink traffic.
TCP RST Message Threshold	Indicates whether a threshold limit is set on the number of TCP reset messages sent by the subscriber for a particular data flow.
TCP RST Message Threshold Value	The threshold value set for the number of TCP reset messages sent by the subscriber for a particular data flow. Range: 1 to 100
ICMP Dest-Unreachable Threshold	Indicates whether a threshold limit is set on the number of ICMP error messages sent by the subscriber for a particular data flow.
ICMP Dest-Unreachable Threshold Value	The threshold value set for the number of ICMP error messages sent by the subscriber for a particular data flow.
Action upon receiving TCP SYN packet with ECN/CWR Flag set	Indicates the action to be taken on receiving a TCP SYN packet with ECN/CWR Flag set.
Action upon receiving a malformed packet	Indicates the action to be taken on receiving a malformed packet.
Action upon IP Reassembly Failure	Indicates the action to be taken on IP reassembly failure.
Action upon receiving an IP packet with invalid Options	Indicates the action to be taken on receiving an IP packet with invalid options.

■ show active-charging fw-and-nat policy name

Field	Description
Action upon receiving a TCP packet with invalid Options	Indicates the action to be taken on receiving a TCP packet with invalid options.
Action upon receiving an ICMP packet with invalid Checksum	Indicates the action to be taken on receiving an ICMP packet with invalid checksum.
Action upon receiving a TCP packet with invalid Checksum	Indicates the action to be taken on receiving a TCP packet with invalid checksum.
Action upon receiving a UDP packet with invalid Checksum	Indicates the action to be taken on receiving a UDP packet with invalid checksum.
Action upon receiving an ICMP echo packet with id zero	Indicates the action to be taken on receiving an ICMP echo packet with id zero.
TCP Stateful Checks	Indicates whether stateful checks for TCP is enabled or disabled.
First Packet Non-SYN Action	Indicates the action to be taken on flows with first packet Non-SYN.
ICMP Stateful Checks	Indicates whether Stateful checks for ICMP is enabled or disabled.
TCP Partial Connection Timeout	Displays the time period for TCP partial connection, in seconds.
NAT Configuration	
NBR Format	Displays the NAT Binding Record format.
Private IP NPU Flow Timeout	The time period for private IP NPU Flow, in seconds.
Suppress sending NAT bind update to AAA	Indicates if the NAT bind update sent to AAA is suppressed or not.
Default NAT-Realm	The default NAT-realm to be used if no NAT-realm is found as part of firewall ruledefs.
Default Fw-and-nat-action	The Fw-and-nat action to be used when the default NAT-realm is used.

show active-charging flows full

For a TCP flow.

Table 108. show active-charging flows full Command Output Descriptions

Field	Description
Flow-ID	Identifier for flows.
Session-ID	Identifier for ACS session.
Uplink Packets	Total number of packets uplinked.
Uplink Bytes	Total number of bytes uplinked.
Downlink Packets	Total number of packets downlinked.
Downlink Bytes	Total number of bytes downlinked.
MS IP	The MS IP address.
MSNAT IP	The MS NAT IP address.
Server IP	The server IP address.
Transport Protocol	The transport protocol: TCP, UDP, ICMP
Application Protocol	The application protocol.
Video Pacing	Indicates whether video pacing is enabled or disabled.
Video Encoded Bit Rate	The currently enforced bit rate for video pacing.
Video Pacing Initial Burst Size	The initial burst size allowed, in bytes, during video pacing.
Video Pacing Normal Burst Size	The normal burst size allowed, in bytes, during video pacing.
Video Pacing Dropped Bytes	The number of data bytes dropped during video pacing.
Video Payload Bytes Sent towards User	The number of data bytes sent to the UE during video pacing.
Video Pacing Duration	The duration, in seconds, of the video being paced.
TCPMS Port	The TCPMS port number.
TCPMSNAT Port	The TCPMSNAT port number. This field is not displayed for one-to-one NAT.
TCP Server Port	The TCP server port number.
TCP State	Indicates the TCP state.
TCP Prev State	Indicates the previous TCP state.
MS Window Size	The mobile window size.
Server Window Size	The server window size.

Field	Description
MS Retries	Total number of mobile subscriber retries.
Server Retries	Total number of server retries.
ITC Action Applied	Indicates the ITC action applied.
Socket Migration Details:	TCP Proxy Socket Migration related information:
State	Indicates Socket Migration state of the flow. For example, SOCK_MIG_DONE.
Highest ACK Frm Server	Highest acknowledgement number from the server.
Highest Seq Frm Server	Highest sequence number from the server.
Highest ACK Frm MS	Highest acknowledgement number from the MS.
Highest Seq Frm MS	Highest sequence number from the MS.
Seq Frm MS at Mig	Sequence number from MS at migration.
ACK Frm MS at Mig	Acknowledgement number from MS at migration.
Seq Frm Server at Mig	Sequence number from server at migration.
ACK Frm Server at Mig	Acknowledgement number from server at migration.
Data To Be Delivered To MS	Data to be delivered to the MS.
Data To Be Delivered To Server	Data to be delivered to the server.
Highest Seq Frm MS	Highest sequence number from the MS.
Timestamps Enabled	Indicates if timestamps option is enabled.
SACK Enabled	Indicates if selective acknowledgement is enabled.
Wscale From MS	Window scale value from MS.
Wscale From Server	Window scale value from server.
Buffering Statistics:	
Buffered Uplink Packets	Total buffered uplink packets.
Buffered Uplink Bytes	Total buffered uplink bytes.
Buffered Downlink Packets	Total buffered downlink packets.
Buffered Downlink Bytes	Total buffered downlink bytes.
Uplink Packets in Buffer	Total uplink packets in the buffer.
Uplink Bytes in Buffer	Total uplink bytes in the buffer.
Downlink Packets in Buffer	Total downlink packets in the buffer.
Downlink Bytes in Buffer	Total downlink bytes in the buffer.
BuffOver-limit Uplink Pkts	Total number of uplink packets that are over the limit in the buffer.
BuffOver-limit Uplink Bytes	Total number of uplink bytes that are over the limit in the buffer.

Field	Description
BuffOver-limit Downlink Pkts	Total number of downlink packets that are over the limit in the buffer.
BuffOver-limit Downlink Bytes	Total number of downlink bytes that are over the limit in the buffer.
CAE-Readdressing:	
GET Requests redirected	Total number of HTTP GET requests redirected to a CAE.
POST Requests redirected	Total number of HTTP POST requests redirected to a CAE.
Other Requests redirected	Total number of other HTTP requests redirected to a CAE.
HTTP Responses redirected	Total number of HTTP responses redirected to a CAE.
Requests having xheader inserted	Total number of HTTP requests that have x-headers inserted.
Total connect failed to video server	Total number of failed connections to the video server.
Total uplink Bytes	Total number of uplink bytes.
Total uplink Packets	Total number of uplink packets.
Total downlink Bytes	Total number of downlink bytes.
Total downlink Packets	Total number of downlink packets.
Link Monitoring	
Average Throughput	The average TCP throughput of downlink TCP traffic towards the mobile device, in kbps.
Average RTT	The average TCP RTT (Round Trip Time) of downlink TCP traffic towards the mobile device, in milliseconds.
Total ACS flows matching specified criteria	The total ACS flows that match the specified criteria.

show active-charging flows full type p2p

Table 109. show active-charging flows full type p2p Command Output Descriptions

Field	Description
Flow-ID	Identifier for flows.
Session-ID	Identifier for Active Charging session with P2P.
Uplink Packets	Total packets uplinked.
Downlink Packets	Total packets downlinked.
Uplink Bytes	Total bytes uplinked.
Downlink Bytes	Total bytes downlinked.
Transport Protocol	The protocol used for data transport.
Application Protocol	The type of application protocol used for this session.
UDP Client Port	UDP port on client communication.
UDP Server Port	UDP port on server for communication.
ITC Action Applied	Status of Intelligent Traffic Control (ITC) on this session traffic.

show active-charging flows type p2p

Table 110. show active-charging flows type p2p Command Output Descriptions

Field	Description
Flow-ID	Identifier for Flows.
Session-ID	Identifier for Active Charging session with P2P.
Flow-num	Identifies the flow number.
Application Protocol (VV)	The protocol used for application. Supported application protocols are: • HT - HTTP • HS - HTTPS • SM - SMTP • P3 - POP3 • WT - WTP • WS - WSP • DN - DNS • RT - RTP • EM - EMAIL • MM - MMS • FT - FTP • SI - SIP • WW - WWW • RS - RTSP • IM - IMAP • P2 - P2P • RC - RTCP • TF - TFTP • WC - WSP Connection Oriented • WX - WSP Connection-less • XX - Unknown • H3 - H323 • PP - PPTP

Field	Description
Transport Protocol (v)	The protocol used for data transport. Supported data transport protocols are: • T - TCP • U - UDP • I - ICMP and ICMPv6 • G - GREv1 • X - Unknown
Bytes-Up	Total bytes uplinked.
Bytes-Down	Total bytes downlinked.
Packets-Up	Total packets uplinked.
Packets-Down	Total packets downlinked.
Uplink Bytes	Total bytes uplinked.
Downlink Bytes	Total bytes downlinked.
Transport Protocol	The protocol used for data transport.
Application Protocol	The type of application protocol used for this session.
UDP Client Port	UDP port on client communication.
UDP Server Port	UDP port on server for communication.
ITC Action Applied	Status of intelligent traffic control (ITC) on this session traffic.

show active-charging flow-mappings all

Table 111. show active-charging edr-format statistics Command Output Descriptions

Field	Description
Call-ID	The call identification number to which the data flow belongs.
MS IP	The IP address of the mobile subscriber.
MS NAT IP	The NAT IP address allocated to the mobile subscriber.
MS Server IP	The server IP address of the mobile subscriber.
Transport Protocol	The transport protocol of the flow: TCP or UDP
TCP MS Port	The TCP port number of the mobile subscriber.
TCP MS NAT Port	The TCP NAT port number allocated to the mobile subscriber. This field is applicable for many-to-one NAT.
TCP Server Port	The TCP server port number for this flow (destination server port).
UDP MS Port	The UDP port number of the mobile subscriber.
UDP MS NAT Port	The UDP NAT port number allocated to the mobile subscriber. This field is applicable for many-to-one NAT.
UDP Server Port	The UDP server port number for this flow (destination server port).
Flow-Mapping timeout	The timeout after which the flow-mappings will be deleted.
Mapping Expiry	The time in seconds left for the flow-mapping timeout to happen. This value decrements starting from a maximum of “Flow-Mapping timeout”. This value upon reaching zero, the flow mapping will be deleted.

show active-charging group-of-ruledefs name

Table 112. show active-charging group-of-ruledefs name Command Output Descriptions

Field	Description
Service Name	The service in which the specified group-of-ruledefs is configured.
Group-of-Ruledefs Name	Name of the group-of-ruledefs.
RuledefName	Names of the ruledefs added to the group-of-ruledefs.
Priority	The priorities configured for each of the ruledefs in the group-of-ruledefs.
Total group(s)-of-ruledefs found	The total number of group(s)-of-ruledefs matching the specified criteria.

show active-charging nat statistics

Table 113. show active-charging nat statistics Command Output Descriptions

Field	Description
NAT Realm Utilization:	
Realm Name	Name of the NAT realm.
Context	Context in which the NAT realm is configured.
Current IP Address-In-Use	The number of IP addresses from the NAT realm currently in use.
Total IP Address	The total number of IP addresses for the NAT realm.
Current Calls Using-Realm	The number of current calls using the NAT realm.
Current Port-Chunks Available	The number of port chunks currently available.
Current Port-Chunks-In-Use	The number of port chunks currently in use.
Total Port-Chunks	The total number of port chunks for the NAT realm.
Port-Chunk Size	The size of the port chunks.
Statistics:	
Total AAA alloc msgs sent	The total number of AAA allocation messages sent.
Total AAA dealloc msgs sent	The total number of AAA deallocation messages sent.
Total flows denied IP	The total number of subscriber flows that were denied NAT IP address.
Total flows denied port	The total number of subscriber flows that were denied a port.
Total bytes Transferred	The total number of bytes transferred.
Total flows processed	The total number of flows processed.
Average TCP port usage	The average TCP port usage in the allocated TCP ports, i.e out of allocated TCP ports how many got used.
Average UDP port usage	The average UDP port usage in the allocated UDP ports, i.e out of allocated UDP ports how many got used.
Average Others port usage	The average Others (ICMP or GRE) port usage in the allocated others ports, i.e out of allocated 'Others' ports how many got used.
Port-Chunks distribution	
Max no.of chunks used	The maximum number of port chunks used.

Field	Description
Total no.ofsubscribers	Total number of subscribers using maximum number of port chunks.
Current no.ofsubscribers	Total number of current subscribers using maximum number of port chunks.
Total Realms	The total number of NAT realms found.

show active-charging p2p-dynamic-rules verbose

This command is not supported in this release.

show active-charging rulebase name

Table 114. show active-charging rulebase name Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
Rule Base Name	Name of the rulebase.
Charging Action Priorities	
Name	Name of the charging ruledef/ group-of-ruledefs.
Type	The ruledef/ group-of-ruledefs type. • RD: Dynamic ruledef • RS: Static ruledef • RSD: Static and dynamic ruledef • GD: Dynamic group-of-ruledefs • GS: Static group-of-ruledefs • GSD: Static and dynamic group-of-ruledefs
Priority	Priority of the ruledef/ group-of-ruledefs in the rulebase.
Charging-action	The charging action configured with the ruledef/ group-of-ruledefs.
Timedef	The time definition configured with the ruledef/ group-of-ruledefs.
Description	Description of the charging ruledef/ group-of-ruledefs configuration.
Post-processing Action Priorities	
Name	Name of the Post-processing ruledef.
Type	The Post-processing ruledef type.
Priority	Priority of the Post-processing ruledef in the rulebase.
Charging-action	The charging action configured.
Description	Description of the Post-processing ruledef configuration.
Routing Action Priorities	
RuledefName	Name of the routing action ruledef.
Priority	Priority of the routing action ruledef in the rulebase.
Analyzer	Name of the applicable analyzer to routing action ruledef.
Description	Description of the routing ruledef configuration.
Firewall Action Priorities	
RuledefName	Name of the Stateful Firewall ruledef.

Field	Description
Type	Indicates the Stateful Firewall ruledef type. - FD: Firewall Dynamic Ruledef—Predefined and disabled Stateful Firewall rules that can be enabled/disabled by the policy server. - FS: Firewall Static Ruledef—Predefined and enabled Stateful Firewall rules that cannot be modified by the policy server. - FSDP: Firewall Static & Dynamic Ruledef—Predefined and enabled Stateful Firewall rules that can be disabled/enabled by the policy server.
Priority	Priority of the Stateful Firewall ruledef in the rulebase.
Charging-action	The charging action configured.
Port-trigger aux-ports:direction	The auxiliary ports open for traffic, and the direction from which the auxiliary connection is initiated.
EGCDR Fields	
Tariff Time thresholds (min:hrs)	Threshold for tariff in minutes and hours.
Internal Threshold	Internal threshold to generate eG-CDRs in seconds.
Uplink Octets	Total number of octets uplinked.
Downlink Octets	Total number of octets downlinked.
Total Octets	Total number of octets uplinked and downlinked.
Time Based Metering	Status of time based metering.
Content Filtering Group	Status of Content Filtering Server Group support for offline content filtering server (ICAP) support.
Content Filtering Flow Any Error	Indicates whether Content Filtering packets are allowed/discarded in case of ACS error scenarios. This field is displayed only if either the Content Filtering mode or, ICAP server-group is configured.
Content Filtering Policy	The Content Filtering policy.
Content Filtering Mode	Indicates the Content Filtering mode. - Static - Static-and-dynamic
URL-Blacklisting Action	Indicates action to be taken on URL Blacklisting match.
UDR Fields	
Tariff Time thresholds (min:hrs)	Threshold for tariff, in minutes and hours.
Internal Threshold	Internal threshold to generate UDRs, in seconds.
Uplink Octets	Total number of octets uplinked.
Downlink Octets	Total number of octets downlinked.

Field	Description
Total Octets	Total number of octets uplinked and downlinked.
CCA Fields	Information regarding Credit Control Application for prepaid charging.
RADIUS charging context	Name of the RADIUS charging context.
RADIUS Charging Group	Name of RADIUS charging server group.
RADIUS interim interval	Interim interval for RADIUS charging generation.
DIAMETER Requested Service Unit	Information regarding requested service unit for prepaid charging through Diameter.
Uplink Octets	Total number of octets uplinked in Diameter charging.
Downlink Octets	Total number of octets downlinked in Diameter charging.
Total Octets	Total number of octets uplinked and downlinked in Diameter charging.
Quota Retry Time	Duration set to retry for prepaid credit limit.
Quota Holding Time (QHT)	Status of quota holding time configuration.
Quota Time Duration Algorithms	Applicable algorithm for quota time duration.
Flow End Condition	Status of flow end condition configuration.
Handoff	Indicates whether EDRs are generated for handoffs.
Timeout	Indicates whether EDRs are generated for timeouts.
Normal-end-signaling	Indicates whether EDRs are generated for normal end signaling.
Session-end	Indicates whether EDRs are generated for session ends.
Hagr	Indicates whether EDRs are generated for HAGR.
Content-Filtering	Indicates whether EDRs are generated for Content Filtering.
edr-format	Name of the EDR format.
Flow Any Error Charging Action	Indicates the charging action configured for accounting action on packets dropped by Firewall due to any error. If disabled, no accounting is performed on such packets.
Billing Records	Status of billing record generation.
Limit For Total Flows	Status of flow limit setting across all applications.
Limit For TCP Flows	Status of TCP flow limit setting.
Limit For Non-TCP Flows	Status of non-TCP flow limit setting.
Charging Rule Optimization	Type of optimization rule setting for charging.

Field	Description
Firewall Configuration	
Dos-Protection	
Source-Route	Indicates status of protection against IP Source Route IP Option attacks.
Win-Nuke	Indicates status of protection against Win Nuke attacks.
Mime-Flood	Indicates status of protection against MIME Flood attacks.
FTP-Bounce	Indicates status of protection against FTP Bounce attacks.
IP-Unaligned-Timestamp	Indicates status of protection against IP Unaligned Timestamp attacks.
Seq-Number-Prediction	Indicates status of protection against Sequence Number Prediction attacks.
TCP-Window-Containment	Indicates status of protection against TCP Window Containment.
Teardrop	Indicates status of protection against Teardrop attacks.
UDP Flooding	Indicates status of protection against UDP Flooding attacks.
ICMP Flooding	Indicates status of protection against ICMP Flooding attacks.
SYN Flooding	Indicates status of protection against SYN Flooding attacks.
Port Scan	Indicates status of protection against Port Scan attacks.
Max-Packet-Size	
ICMP	For ICMP protocol, the maximum IP packet size (after IP reassembly) allowed over Stateful Firewall.
Non-ICMP	For non-ICMP protocol, the maximum IP packet size (after IP reassembly) allowed over Stateful Firewall.
Flooding	
ICMP limit	The maximum number of ICMP packets allowed during a sampling interval.
UDP limit	The maximum number of UDP packets allowed during a sampling interval.
TCP-SYN limit	The maximum number of TCP-SYN packets allowed during a sampling interval.
Sampling Interval	The flooding sampling interval, in seconds.
TCP-SYN Flood Intercept	
Mode	The TCP SYN flood intercept mode. • none • intercept • watch
Max-Attempts	The maximum number of attempts for sending proxy SYN to the target.
Retrans-timeout	The SYN-Proxy retransmit timeout, in seconds.
Watch-timeout	The TCP intercept watch timeout, in seconds.

Field	Description
Mime-Flood Params	
HTTP Header-Limit	The maximum number of headers allowed in an HTTP packet.
HTTP Max-Header-Field-Size	The maximum header field size allowed in an HTTP header, in bytes.
No Firewall Ruledef Match Action	
Uplink Action	Action configured for uplink packets with no Stateful Firewall ruledef matches.
Uplink Charging-Action	Charging action configured for uplink packets with no Stateful Firewall ruledef matches.
Downlink Action	Action configured for downlink packets with no Stateful Firewall ruledef matches.
Downlink Charging-Action	Charging action configured for downlink packets with no Stateful Firewall ruledef matches.
ICMP Dest-Unreachable Threshold	Indicates whether a threshold limit is set on the number of ICMP error messages sent by the subscriber for a particular data flow.
ICMP Dest-Unreachable Threshold Value	The threshold value set for the number of ICMP error messages sent by the subscriber for a particular data flow.
QoS Renegotiation Timeout	The timeout setting for the Quality of Service (QoS) Renegotiation feature.
EDR Suppress zero byte records	Indicates whether EDR suppression of zero byte records is enabled.
EDR Timestamp Rounding	Type of timestamp rounding set for Event Detail Records.
EGCDR Timestamp Rounding	Type of timestamp rounding set for eG-CDRs.
RTP Dynamic Routing	Status of RTP dynamic routing configuration.
Ignore port no. in application headers	Status of ignoring port numbers in application headers.
Delayed Charging	Status of charging configuration to exclude initial handshaking TCP packets from charging.
IP Reassembly-Timeout	IP reassembly timeout period in milliseconds.
IP Reset ToS field	Status of IP Reset ToS field.
TCP Out-of-Order-Timeout	TCP out-of-order timeout period in milliseconds.
TCP 2MSL Timeout	TCP 2MSL timeout period in seconds.
WTP Out-of-Order-Timeout	WTP out-of-order timeout period in milliseconds.
TCP transmit-out-of-order-packets	Status of transmitting TCP out-of-order packets.

Field	Description
Verify TCP checksum	Status of verifying TCP checksum errors.
Verify UDP checksum	Status of verifying UDP checksum errors.
P2P Dynamic Routing	Status of P2P dynamic routing.
Total rulebase(s) found	Total number of rulebases matching the criteria.
CAE-Readdressing	Indicates whether CAE re-addressing on the Mobile Video Gateway is enabled or disabled.
Percentage Rate Reduction	If enabled, indicates the configured bitrate reduction for mobile video as a percentage of the input bitrate.
HTTP header-parse-limit	For a customer-specific feature, this field indicates the HTTP header parse limit, in bytes. On exceeding this limit the flow is marked as permanent failure and is matched and charged against <code>http error = TRUE</code> ruledef. If the feature is disabled, shows “disabled”.

show active-charging rulebase statistics

Table 115. show active-charging rulebase statistics Command Output Descriptions

Field	Description
Service Name	Name of the ACS service.
Rulebase Name	Name of the rulebase.
Uplink Pkts	Total number of packets uplinked.
Uplink Bytes	Total number of bytes uplinked.
Downlink Pkts	Total number of packets downlinked.
Downlink Bytes	Total number of bytes downlinked.
Readdressed Upl Pkts	Total number of readdressed uplinked packets.
Readdressed Upl Bytes	Total number of readdressed uplinked bytes.
Readdressed Dnl Pkts	Total number of readdressed downlinked packets.
Readdressed Dnl Bytes	Total number of readdressed downlinked bytes.
TCP MSS Inserted Pkts	Total number of TCP Maximum Segment Size (MSS) inserted packets.
TCP MSS Limited Pkts	Total number of TCP MSS limited packets.
ITC Terminated Flows	Total number of ITC terminated flows.
Total PP Dropped Packets	Total number of packets dropped.
Total PP Dropped Packet Bytes	Total number of bytes dropped.
R7Gx Rule-Matching Failure Stats:	
Total Dropped Packets	Total number of packets dropped by R7Gx due to rule matching failure, for the rulebase.
Total Dropped Packet Bytes	Total number of bytes dropped by R7Gx due to rule matching failure, for the rulebase.
TCP-proxy reset for non-SYN flows	Total number of resets sent by TCP Proxy for flows with no SYN packet after recovery.
EDRs	
Total EDRs generated	Total number of EDRs generated.
EDRs generated for handoff	Total number of EDRs generated for handoffs.
EDRs generated for timeout	Total number of EDRs generated for timeouts.
EDRs generated for normal-end-signaling	Total number of EDRs generated for normal end signalling.
EDRs generated for session end	Total number of EDRs generated for session ending.

Field	Description
EDRs generated for rule match	Total number of EDRs generated for rule matches.
EDRs generated for hagr	Total number of EDRs generated for HAGR.
EDRs generated for flow-end content-filtering	Total number of EDRs generated for flow-end Category-based Content Filtering.
EDRs generated for flow-end url-blacklisting	Total number of EDRs generated for flow-end URL Blacklisting.
EDRs generated for content-filtering	Total number of EDRs generated for Category-based Content Filtering.
EDRs generated for url-blacklisting	Total number of EDRs generated for URL Blacklisting.
EDRs generated for any-error packets	Total number of EDRs generated for any-error packets.
EDRs generated for firewall deny rule match	Total number of EDRs generated for firewall deny rule match.
EDRs generated for transaction completion	Total number of EDRs generated for completion of transactions.
EDRs generated for voip call end	Total number of EDRs generated on completion of voice calls.
Total Flow-Overflow EDRs	Total number of Flow-Overflow EDRs.
UDRs	
Total UDRs generated	Total number of UDRs generated.
UDRs generated for handoff	Total number of UDRs generated for handoffs.
UDRs generated for time limit	Total number of UDRs generated for time limits.
UDRs generated for volume limit	Total number of UDRs generated for volume limits.
UDRs generated for call end	Total number of UDRs generated for call endings.
UDRs generated for hagr	Total number of UDRs generated for HAGR.
GCDRs	
Total EGCDRs generated	Total number of eG-CDRs generated.
GCDRs for Normal Release	Total number of G-CDRs generated for normal releases.
GCDRs for Abnormal Release	Total number of G-CDRs generated for abnormal releases.
GCDRs for Volume Limit	Total number of G-CDRs generated for volume limits.
GCDRs for Time Limit	Total number of G-CDRs generated for time limits.
GCDRs for SGSN Change	Total number of G-CDRs generated for SGSN change.
GCDRs for Max Change Cond	Total number of G-CDRs generated for maximum change condition.
GCDRs for Mgmt Intervention	Total number of G-CDRs generated for management interventions.
GCDRs for RAT Change	Total number of G-CDRs generated for RAT changes.
GCDRs for MS Timezone Change	Total number of G-CDRs generated for MS timezone changes.
GCDRs for SGSN PLMN ID Change	Total number of G-CDRs generated for SGSN PLMN ID changes.

Field	Description
PGWCDRs for Normal Release	Total number of PGW-CDRs generated for normal releases.
PGWCDRs for Abnormal Release	Total number of PGW-CDRs generated for abnormal releases.
PGWCDRs for Volume Limit	Total number of PGW-CDRs generated for volume limits.
PGWCDRs for Time Limit	Total number of PGW-CDRs generated for time limits.
PGWCDRs for ServingNode Change	Total number of PGW-CDRs generated for ServingNode change.
PGWCDRs for Max Change Cond	Total number of PGW-CDRs generated for maximum change condition.
PGWCDRs for Mgmt Intervention	Total number of PGW-CDRs generated for management interventions.
PGWCDRs for RAT Change	Total number of PGW-CDRs generated for RAT changes.
PGWCDRs for MS Timezone Change	Total number of PGW-CDRs generated for MS timezone changes.
PGWCDRs for SGSN PLMN ID Change	Total number of PGW-CDRs generated for SGSN PLMN ID changes.
NBRs	NAT Binding Record (NBR) statistics. These fields are displayed, only if configured, in 8.3 and later releases.
Total NBRs generated	Total number of NBRs generated.
NBRs generated for port chunk allocation	Total number of NBRs generated for port chunk allocation.
NBRs generated for port chunk release	Total number of NBRs generated for port chunk release.
CAE-Readdressing:	
GET Requests redirected	Total number of HTTP GET requests redirected to a CAE.
POST Requests redirected	Total number of HTTP POST requests redirected to a CAE.
Other Requests redirected	Total number of other HTTP requests redirected to a CAE.
HTTP Responses redirected	Total number of HTTP responses redirected to a CAE.
HTTP Requests having xheader inserted	Total number of HTTP requests that have x-headers inserted.
Total Connect failed to video server	Total number of failed connections to the video server.
Total uplink bytes	Total number of uplink bytes.
Total uplink packets	Total number of uplink packets.
Total downlink bytes	Total number of downlink bytes.
Total downlink packets	Total number of downlink packets.

show active-charging rulebase statistics name

Table 116. show active-charging rulebase statistics name Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
Rulebase Name	Name of the rulebase.
Uplink Pkts	Total number of packets uplinked.
Uplink Bytes	Total number of bytes uplinked.
Downlink Pkts	Total number of packets downlinked.
Downlink Bytes	Total number of bytes downlinked.
Readdressed Upl Pkts	Total number of readdressed uplink packets.
Readdressed Upl Bytes	Total number of readdressed uplink bytes.
Readdressed Dnl Pkts	Total number of readdressed downlink packets.
Readdressed Dnl Bytes	Total number of readdressed downlink bytes.
TCP MSS Inserted Pkts	Total number of Maximum Segment Size (MSS) inserted packets.
TCP MSS Limited Pkts	Total number of MSS limited packets.
ITC Terminated Flows	Total number of flows terminated by Intelligent Traffic Control service.
Total PP Dropped Packets	Total number of packets dropped.
Total PP Dropped Packet Bytes	Total number of bytes dropped.
R7Gx Rule-Matching Failure Stats:	
Total Dropped Packets	Total number of packets dropped by R7Gx due to rule matching failure, for the rulebase.
Total Dropped Packet Bytes	Total number of bytes dropped by R7Gx due to rule matching failure, for the rulebase.
P2P random drop stats:	
Total Dropped Packets	Total number of packets dropped due to random drop to degrade voice quality.
Total Dropped Packet Bytes	Total number of bytes dropped due to random drop to degrade voice quality.
EDRs:	
Total EDRs generated	Total number of EDRs generated.
EDRs generated for handoff	Total number of EDRs generated for handoffs.
EDRs generated for timeout	Total number of EDRs generated for timeouts.
EDRs generated for normal-end-signaling	Total number of EDRs generated for normal end signaling.

Field	Description
EDRs generated for session end	Total number of EDRs generated for session ends.
EDRs generated for rule match	Total number of EDRs generated for rule matches.
EDRs generated for hagr	Total number of EDRs generated for HAGR.
EDRs generated for flow-end content-filtering	Total number of EDRs generated for flow-end content filtering.
EDRs generated for content-filtering	Total number of EDRs generated for content filtering.
EDRs generated for any-error packets	Total number of EDRs generated for packets dropped by Firewall due to any error.
EDRs generated for firewall deny rule match	Total number of EDRs generated for firewall deny rule matches.
EDRs generated for voip call end	Total number of EDRs generated on completion of voice calls.
UDRs:	
Total UDRs generated	Total number of UDRs generated.
UDRs generated for handoff	Total number of UDRs generated for handoffs.
UDRs generated for time limit	Total number of UDRs generated for time limits.
UDRs generated for volumelimit	Total number of UDRs generated for volume limits.
UDRs generated for call end	Total number of UDRs generated for call ends.
UDRs generated for hagr	Total number of UDRs generated for HAGR.
GCDRs:	
Total EGCDRs generated	Total number of eG-CDRs generated.
GCDRs for Normal Release	Total number of G-CDRs generated for normal releases.
GCDRs for Abnormal Release	Total number of G-CDRs generated for abnormal releases.
GCDRs for Volume Limit	Total number of G-CDRs generated for volume limits.
GCDRs for Time Limit	Total number of G-CDRs generated for time limits.
GCDRs for SGSN Change	Total number of G-CDRs generated for SGSN changes.
GCDRs for Max Change Cond	Total number of G-CDRs generated for maximum change condition.
GCDRs for Mgmt Intervention	Total number of G-CDRs generated for management interventions.
GCDRs for RAT Change	Total number of G-CDRs generated for RAT changes.
GCDRs for MS Timezone Change	Total number of G-CDRs generated for MS timezone changes.
GCDRs for SGSN PLMN ID Change	Total number of G-CDRs generated for SGSN PLMN ID changes.
Total rulebases matched	Total number of rulebases that matched the specified criteria.

show active-charging ruledef firewall

Table 117. show active-charging ruledef firewall Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
RuledefName	Name of the ruledef.
tcp dst-port	The TCP destination port number.
tcp src-port	The TCP source port number.
udp dst-port	The UDP destination port number.
udp src-port	The TCP source port number.
ip any-match	Indicates whether the ruledef analyzes user traffic based on IP analyzed state—true/false.
Rule Application Type	The rule application type—firewall.
Create-log-record	Indicates whether logging is enabled or disabled.
Total ruledef(s) configured	Total number of Stateful Firewall ruledefs configured.

show active-charging ruledef statistics

Table 118. show active-charging ruledef statistics Command Output Descriptions

Field	Description
Total Charging Ruledefs	Total number of charging ruledefs configured.
Uplink Packets	Total number of packets received in uplink flow.
Uplink Bytes	Total number of bytes received in uplink flow.
Downlink Packets	Total number of packets received in downlink flow.
Downlink Bytes	Total number of bytes received in downlink flow.
Hits	Total number of events.
Total Post-processing Ruledefs	Total number of post-processing ruledefs configured.
Uplink Packets	Total number of packets received in uplink flow.
Uplink Bytes	Total number of bytes received in uplink flow.
Downlink Packets	Total number of packets received in downlink flow.
Downlink Bytes	Total number of bytes received in downlink flow.
Hits	Total number of events.
Total Firewall Ruledefs	Total number of Stateful Firewall ruledefs configured.
Uplink Packets	Total number of packets received in uplink flow.
Uplink Bytes	Total number of bytes received in uplink flow.
Downlink Packets	Total number of packets received in downlink flow.
Downlink Bytes	Total number of bytes received in downlink flow.
Uplink Packets Dropped	Total number of packets dropped in uplink flow.
Uplink Bytes Dropped	Total number of bytes dropped in uplink flow.
Downlink Packets Dropped	Total number of packets dropped in downlink flow.
Downlink Bytes Dropped	Total number of bytes dropped in downlink flow.
Hits	Total number of events.

show active-charging ruledef statistics all firewall wide

Table 119. show active-charging ruledef statistics all firewall wide Command Output Descriptions

Field	Description
RuledefName	Name of the Stateful Firewall ruledef.
Packets-Down	Total number of packets downlinked.
Bytes-Down	Total number of bytes downlinked.
Packets-Up	Total number of packets uplinked.
Bytes-Up	Total number of bytes uplinked.
Pkts-Drop-Dn	Total number of downlink packets dropped.
Bytes-Drop-Dn	Total number of downlink bytes dropped.
Pkts-Drop-Up	Total number of uplink packets dropped.
Bytes-Drop-Up	Total number of uplink bytes dropped.
Hits	Total number of events.
Total Ruledef(s)	Total number of ruledefs.

show active-charging ruledef statistics all charging

Table 120. show active-charging ruledef statistics all charging Command Output Descriptions

Field	Description
RuledefName	Name of the charging ruledef.
Packets-Down	Total number of packets downlinked.
Bytes-Down	Total number of bytes downlinked.
Packets-Up	Total number of packets uplinked.
Bytes-Up	Total number of bytes uplinked.
Hits	Total number of events.
Total Ruledef(s)	Total number of charging ruledefs.

show active-charging ruledef statistics all tpo

Table 121. show active-charging ruledef statistics all tpo Command Output Descriptions

Field	Description
RuledefName	Name of each TPO ruledef configured.
Hits	Number of hits per each TPO ruledef.
Total Ruledef(s)	Total number of TPO ruledefs configured.

show active-charging service all

Table 122. show active-charging service all Command Output Descriptions

Field	Description
Service name	Name of the Active Charging Service.
TCP Flow Idle Timeout	TCP flow idle timeout period, in seconds.
UDP Flow Idle Timeout	UDP flow idle timeout period, in seconds.
ICMP Flow Idle Timeout	ICMP flow idle timeout period, in seconds.
ALG Media Idle Timeout	The configured ALG media idle timeout value, in seconds.
TCP Flow-Mapping Idle Timeout	The configured TCP flow-mapping timeout value, in seconds.
UDP Flow-Mapping Idle Timeout	The configured UDP flow-mapping timeout value, in seconds.
Deep Packet Inspection	Indicates whether Deep Packet Inspection is enabled.
Passive Mode	Indicates whether Passive Mode is enabled.
CDR Flow Control	Indicates whether CDR Flow Control is enabled.
Content Filtering	Indicates whether Category-based Content Filtering is enabled.
Dynamic Content Filtering	Indicates whether Dynamic Content Filtering is enabled.
URL-Blacklisting	Indicates whether URL Blacklisting is enabled.
URL-Blacklisting Match-method	Indicates the URL Blacklisting method to look up URLs in the URL Blacklisting database.
Content Filtering Match-method	Indicates the match method to look up URLs in the category-based content filtering database.
Interpretation of Charging-rule-base-name	Indicates how the Charging-Rule-Base-Name AVP from PCRF is interpreted, either as ACS rulebase or ACS group-of-ruledefs.
Credit Control:	
Mode	Indicates the pre-paid charging application mode—Diameter or RADIUS.
APN-name-to-be-included	Indicates the APN name to be sent in CCA messages.
Trigger-Type	Indicates the credit control reauthorization trigger type.
Failure-Handling	
Initial-Request	Indicates whether initial-request calls will be continued/terminated/retired in the event of a communication failure with the pre-paid server.
Update-Request	Indicates whether update-request calls will be continued/terminated/retired in the event of a communication failure with the pre-paid server.

Field	Description
Terminate-Request	Indicates whether terminate-request calls will be continued/terminated/retired in the event of a communication failure with the pre-paid server.
Server Unreachable Failure-Handling	
Initial-Request	Indicates whether initial-request calls will be continued/terminated when Diameter server(s)/OCS are unreachable.
Update-Request	Indicates whether update-request calls will be continued/terminated when Diameter server(s)/OCS are unreachable.
Diameter:	
Endpoint	Name of the Diameter endpoint.
Endpoint-Realm	Realm of the Diameter endpoint.
Dictionary	The Diameter dictionary used for CreditControl.
Session-Failover	Indicates whether Session Failover is supported.
Pending-Timeout	Indicates the pending timeout period, in seconds.
Peer-Select:	
Peer	Name of the peer.
Realm	Indicates realm for the peer.
Secondary-Peer	Name of the secondary peer.
Realm	Indicates realm for the secondary peer.
IMSI-Based Start-Value	To select the Diameter peer based on the International Mobile Subscriber Identification (IMSI) number, specify the start of range in integer value of IMSI.
IMSI-Based End-Value	The end of range in integer value of IMSI.
Quota	
Request-Trigger	Indicates the trigger action on packets on crossing the threshold limit of subscriber quota in the pre-paid credit control service.
Holding-Time	Indicates the Quota Holding Time (QHT).
Validity-Time	Indicates the validity lifetime of the quota in seconds.
Time-Threshold	Indicates the time threshold for pre-paid credit control quota.
Units-Threshold	Indicates the units threshold for DCCA quota in percentage.
Volume-Threshold	Indicates the volume threshold for pre-paid credit control quota.
Pending-Traffic-Treatment	
trigger	Indicates the trigger status.
forced-reauth	Indicates status of the Diameter credit control pending traffic treatment for forced reauthorization.
no-quota	Indicates status of the Diameter credit control pending traffic treatment quota.
quota-exhausted	Indicates status of the Diameter credit control pending traffic treatment for exhausted quota.

■ show active-charging service all

Field	Description
validity-expired	Indicates status of the Diameter credit control pending traffic treatment for validity.
diameter mscc-final-unit-action terminate	Indicates whether a PDP session or a category is terminated based on the user's quota and Final-Unit-Action (FUA) at Multiple-Services-Credit-Control (MSCC) level.

show active-charging sessions firewall required

Table 123. show active-charging sessions firewall required Command Output Descriptions

Field	Description
SESSIONID	The active charging session ID.
CALLID	The call ID.
IMSI/MSID	The International Mobile Subscriber Identification/Mobile Station ID.
IP	IP address of client.
USERNAME	Name of the subscriber.
Total acs sessions matching specified criteria	Total number of ACS sessions with firewall enabled.

show active-charging sessions full

Table 124. show active-charging session full Command Output Descriptions

Field	Description
Session-ID	The active charging session ID.
Username	Name of the subscriber.
Callid	The Call ID.
IMSI/MSID	Indicates the International Mobile Subscriber Identification/Mobile Station ID.
ACSMgr Instance	Total instances of ACS Manager.
ACSMgr Card/Cpu	Total number of ACS Manager Card/CPU.
Client-IP	In 12.3 and earlier releases, IPv6 address or IPv4 address of the client for all call types.
SessMgr Instance	Total instances of Session Manager.
NAS-IP	IP address of Network Access Server.
NAS-PORT	TCP port of Network Access Server.
Access-NAS-IP(FA)	IP address of accessed Network Access Server Foreign Agent (FA).
NSAPI	Total instances of NS APIs used.
Acct-Session-ID	The accounting session ID.
NAS-ID	The Network Access Server ID.
Access-NAS-ID(FA)	Accessed Network Access Server Foreign Agent (FA) ID.
3GPP2-BSID	3GPP2 base station ID.
Access-Correlation-ID(FA)	Access correlation ID for FA.
3GPP2-Correlation-ID	Mobile IP Correlation ID.
MEID	Mobile equipment's unique Mobile Equipment Identifier (MEID).
Carrier-ID	Carrier or service ID.
ESN	Electronic Serial Number (ESN) of mobile equipment.
Uplink Bytes	Total bytes uploaded.
Downlink Bytes	Total bytes downloaded.
Uplink Packets	Total packets uploaded.
Downlink Packets	Total packets downloaded.
Injected Uplink Bytes	Total bytes injected to upload.

Field	Description
Injected Downlink Bytes	Total bytes injected to download.
Injected Uplink Packets	Total packets injected to upload.
Injected Downlink Packets	Total packets injected to download.
Buffered Uplink Packets	Total buffered packets for uplink.
Buffered Downlink Packets	Total buffered packets for downlink.
Buffered Uplink Bytes	Total buffered bytes for uplink.
Buffered Downlink Bytes	Total buffered bytes for uplink.
Uplink Packets in Buffer	Total number of uplink packets in the buffer.
Uplink Bytes in Buffer	Total number of uplink bytes in the buffer.
Downlink Packets in Buffer	Total number of downlink packets in the buffer.
Downlink Bytes in Buffer	Total number of downlink bytes in the buffer.
Buff Over-limit Uplink Pkts	Total number of uplink packets that were over the buffer limit.
Buff Over-limit Uplink Bytes	Total number of uplink bytes that were over the buffer limit.
Buff Over-limit Downlink Pkts	Total number of downlink packets that were over the buffer limit.
Buff Over-limit Downlink Bytes	Total number of downlink bytes that were over the buffer limit.
Processed Uplink Packets	Total packets processed for upload.
Processed Downlink Packets	Total packets processed for download.
Dropped Uplink Packets	Total packets dropped in uplink direction.
Dropped Downlink Packets	Total packets dropped in downlink direction.
Uplink Out of Order Packets	Total out of order packets in uplink direction.
Downlink Out of Order Packets	Total out of order packets in downlink direction.
ITC Terminated Flows	Total number of flows terminated by Intelligent Traffic Control service.
ITC Redirected Flows	Total number of flows redirected by Intelligent Traffic Control service.
ITC Dropped Packets	Total number of packets dropped by Intelligent Traffic Control service.
ITC ToS Remarkd Packets	Total number of packets marked with Type of Service (ToS) by Intelligent Traffic Control service.

Field	Description
ITC Dropped UpI Pkts	Total number of packets in uplink direction, that were dropped by Intelligent Traffic Control service.
ITC Dropped DnI Pkts	Total number of packets in downlink direction, that were dropped by Intelligent Traffic Control service.
ITC Dropped UpI Bytes	Total number of uplink bytes dropped by Intelligent Traffic Control service.
ITC Dropped DnI Bytes	Total number of downlink bytes dropped by Intelligent Traffic Control service.
R7Gx Dropped UpI Packets	Total number of packets dropped by R7Gx in uplink direction.
R7Gx Dropped DnI Packets	Total number of packets dropped by R7Gx in downlink direction.
R7Gx Dropped UpI Pkts RuleMatch Fail	Total number of packets dropped by R7Gx in uplink direction due to rulematch failure—no matching rule is found.
R7Gx Dropped UpI Bytes RuleMatch Fail	Total number of bytes dropped by R7Gx in uplink direction due to rulematch failure.
R7Gx Dropped DnI Pkts RuleMatch Fail	Total number of packets dropped by R7Gx in downlink direction due to rulematch failure.
R7Gx Dropped DnI Bytes RuleMatch Fail	Total number of bytes dropped by R7Gx in downlink direction due to rulematch failure.
CC Dropped Uplink Packets	Total number of packets dropped by credit control in uplink direction.
CC Dropped Uplink Bytes	Total number of bytes dropped by credit control in uplink direction.
CC Dropped Downlink Packets	Total number of packets dropped by credit control in downlink direction.
CC Dropped Downlink Bytes	Total number of bytes dropped by credit control in downlink direction.
NRUPC Req Made	Total number of Network Requested Update PDP Context (NRUPC) requests made.
NRUPC Req Success	Total number of NRUPC requests succeeded.
NRUPC Req Failed	Total number of NRUPC requests failed.
NRUPC Req Time Out	Total number of NRUPC requests timed out.
Current Readdressed Sessions	Number of current re-addressed sessions
Total Readdressed Uplink Pkts	Total number of re-addressed uplink packets.
Total Readdressed Uplink Bytes	Total number of re-addressed uplink bytes.
Total Readdressed Downlink Pkts	Total number of re-addressed downlink packets.
Total Readdressed Downlink Bytes	Total number of re-addressed downlink bytes.

Field	Description
Total Readdressing Failure	Total number re-addressing failures.
Creation Time	Time display in UTC format.
Last Pkt Time	Time of last packet created.
Duration	Duration of session.
Active Charging Service name	Name of the active charging service.
Rule Base name	Name of the rulebase applied.
Bandwidth Policy	The ACS bandwidth policy applicable for subscriber.
Firewall Policy	Indicates whether Stateful Firewall processing is required for subscriber.
FW-and-NAT Policy	The Stateful Firewall-and-NAT policy applicable for subscriber.
NAT Policy	Indicates whether NAT processing is required for subscriber.
TPO Policy	The TPO policy applicable for subscriber.
CF Policy ID	The content filtering policy identifier applicable for subscriber.
Dynamic Charging	Status of dynamic charging functionality.
Dynamic Chrg Msg Received	Total number of messages received for dynamic charging.
Rule Definitions Received	Total number of ruledefs received.
Installs Received	Total number of "Charging-Rule-Install" messages received.
Removes Received	Total number of "Charging-Rule-Remove" messages received.
Installs Succeeded	Total number of charging rules installed successfully.
Installs Failed	Total number of charging rules installation failed.
Removes Succeeded	Total number of charging rules removed successfully.
Removes Failed	Total number of charging rules removal failed.
Uplink Dynamic Rule Packets	Total number of packets uplinked with dynamic rules.
Uplink Dynamic Rule Bytes	Total number of bytes uplinked with dynamic rules.
Downlink Dynamic Rule Packets	Total number of packets downlinked with dynamic rules.
Downlink Dynamic Rule Bytes	Total number of bytes downlinked with dynamic rules.
Credit-Control	Displays the status of DCCA (on/off).
CC Peer	Name of the credit control (CC) peer.
CC Group	Displays the selected credit control group information.

Field	Description
CC Mode	Indicates the credit control mode: RADIUS or DIAMETER
CC Failure Handling	Action configured for credit control failure handling.
CC Session Failover	Credit control session failover status.
CCR-I Server Unreachable Handling	Indicates whether initial-request calls will be continued/terminated when Diameter server(s)/OCS are unreachable.
CCR-U Server Unreachable Handling	Indicates whether update-request calls will be continued/terminated when Diameter server(s)/OCS are unreachable.
Total CCR-U	The total number of CCR-Updates (Credit Control Request with Update) messages sent to the credit control server.
Current TCP Proxy Flows	Total number of current TCP Proxy flows for the session.
Total TCP Proxy Flows	Total number of TCP Proxy flows for the session.
TCP-proxy reset for non-SYN flows	Total number of resets sent by TCP Proxy for flows with no SYN packet after recovery.
Current IP Flows	Total number of current IP flows.
Current ICMP Flows	Total number of current ICMP flows.
Current IPv6 Flows	Total number of current IPv6 flows.
Current ICMPv6 Flows	Total number of current ICMPv6 flows.
Current TCP Flows	Total number of current TCP flows.
Current UDP Flows	Total number of current UDP flows.
Current HTTP Flows	Total number of current HTTP flows.
Current HTTPS Flows	Total number of current HTTPS flows.
Current FTP Flows	Total number of current FTP flows.
Current POP3 Flows	Total number of current POP3 flows.
Current SMTP Flows	Total number of current SMTP flows.
Current SIP Flows	Total number of current SIP flows.
Current RTSP Flows	Total number of current RTSP flows.
Current RTP Flows	Total number of current RTP flows.
Current RTCP Flows	Total number of current RTCP flows.
Current IMAP Flows	Total number of current IMAP flows.
Current WSP-CO Flows	Total number of current WSP-CO flows.
Current WSP-CL Flows	Total number of current WSP-CL flows.
Current MMS Flows	Total number of current MMS flows.
Current DNS Flows	Total number of current DNS flows.

Field	Description
Current PPTP-GRE Flows	Total number of current PPTP-GRE flows.
Current PPTP Flows	Total number of current PPTP flows.
Current TFTP Flows	Total number of current TFTP flows.
Current P2P Flows	Total number of current P2P flows.
Current H323 Flows	Total number of current H323 flows.
Current UNKNOWN Flows	Total number of current UNKNOWN flows.
CAE-Readdressing:	
GET Requests redirected	Total number of HTTP GET requests redirected to a CAE.
POST Requests redirected	Total number of HTTP POST requests redirected to a CAE.
Other Requests redirected	Total number of other HTTP requests redirected to a CAE.
HTTP Responses redirected	Total number of HTTP responses redirected to a CAE.
Requests having xheader inserted	Total number of HTTP requests that have x-headers inserted.
Total connection failed to video server	Total number of failed connections to the video server.
Total uplink Bytes	Total number of uplink bytes.
Total uplink Packets	Total number of uplink packets.
Total downlink Bytes	Total number of downlink bytes.
Total downlink Packets	Total number of downlink packets.
Rating-Group	Rating-Group of the MSCC which is used by DCCA.
Service-Identifier	Service-Identifier of the MSCC which is used by DCCA
State	State in which the MSCC (identified by Rating-Group and Service-Identifier) is present. For example, Charging, Limit-Reached, Rating-Failed
Checkpoint State	Checkpoint status of the MSCC. It can be either Current or Outdated. Current implies that the MSCC is checkpointed recently. Outdated means the MSCC is ready to get checkpointed to update its new status.
Pending Update	This indicates whether a response is awaited from the server for this MSCC, after sending a CCR-U.
Last Answer	Time duration from the last sent CCR-Update request for this MSCC.
RuledefName	Name of the ACS ruledef.
Pkts-Down	Total number of packets downlinked.
Bytes-Down	Total number of bytes downlinked.
Pkts-Up	Total number of packets uplinked.
Bytes-Up	Total number of bytes uplinked.

Field	Description
Hits	Total number of packets handled in uplink and downlink directions.
Firewall-RuledefName	Name of the Stateful Firewall ruledef.
Pkts-Down	Total number of packets downlinked.
Bytes-Down	Total number of bytes downlinked.
Pkts-Up	Total number of packets uplinked.
Bytes-Up	Total number of bytes uplinked.
Hits	Total number of packets handled in uplink and downlink directions.
Dynamic Charging Rule Name Statistics	Dynamic charging rule name statistics.
Dynamic Charging Rule Name Configured	Dynamic charging rule name configured.
Predefined Rules Enabled List	List of enabled predefined rules.
Predefined Firewall Rules Enabled List	List of enabled predefined Firewall rules.
NCQoS NRUPC Req Made	Total number of network-controlled QoS Network Requested Update PDP Context requests made.
NCQoS NRSPCA Req Made	Total number of network-controlled QoS Network Requested Secondary PDP Context Activation requests made.
NCQoS NRUPC Req Failed	Total number of network-controlled QoS Network Requested Update PDP Context requests failed.
NCQoS NRSPCA Req Failed	Total number of network-controlled QoS Network Requested Secondary PDP Context Activation requests failed.
NCQoS NRUPC Req Success	Total number of network-controlled QoS Network Requested Update PDP Context requests succeeded.
NCQoS NRSPCA Req Success	Total number of network-controlled QoS Network Requested Secondary PDP Context Activation requests succeeded.
Total acs sessions matching specified criteria	Total number of ACS sessions matching the specified criteria.

show active-charging sessions full all

Table 125. show active-charging sessions full all Command Output Descriptions

Field	Description
Session-ID	The active charging session ID.
Username	The subscriber's name.
Callid	Call identification.
IMSI/MSID	The International Mobile Subscriber Identification/Mobile Station ID.
ACSMgr Instance	Total instance of ACS Manager.
ACSMgr Card/Cpu	Total number of ACS Manager Card/CPU.
SessMgr Instance	Total instance of session manager.
Client-IP	In 12.3 and earlier releases, IPv6 address or IPv4 address of the client for all call types.
NAS-IP	Indicates the IP address of Network Access Server.
Access-NAS-IP(FA)	Indicates the IP address of accessed Network Access Server Foreign Agent (FA).
NAS-PORT	Indicates the TCP port of Network Access Server.
NSAPI	Total instances of NS APIs used.
Acct-Session-ID	Indicates the accounting session ID.
NAS-ID	The Network Access Server identifier.
Access-NAS-ID(FA)	Indicates the identifier of accessed Network Access Server Foreign Agent (FA).
3GPP2-BSID	Indicates the 3GPP2 base station identifier.
Access-Correlation-ID(FA)	Indicates the access correlation ID for FA.
3GPP2-Correlation-ID	Indicates the Mobile IP Correlation ID.
MEID	Indicates the Mobile equipment's unique Mobile Equipment Identifier (MEID).
Carrier-ID	Indicates the carrier or service ID.
ESN	Indicates the Electronic Serial Number (ESN) of mobile equipment.
Uplink Bytes	Total bytes uploaded.
Downlink Bytes	Total bytes downloaded.
Uplink Packets	Total packets uploaded.
Downlink Packets	Total packets downloaded.
Injected Uplink Bytes	Total bytes injected to upload.
Injected Downlink Bytes	Total bytes injected to download.

■ show active-charging sessions full all

Field	Description
Injected Uplink Packets	Total packets injected to upload.
Injected Downlink Packets	Total packets injected to download.
Buffered Uplink Packets	Total buffered packets for uplink.
Buffered Downlink Packets	Total buffered packets for downlink.
Buffered Uplink Bytes	Total buffered bytes for uplink.
Buffered Downlink Bytes	Total buffered bytes for uplink.
Uplink Packets in Buffer	Total number of uplink packets in the buffer.
Uplink Bytes in Buffer	Total number of uplink bytes in the buffer.
Downlink Packets in Buffer	Total number of downlink packets in the buffer.
Downlink Bytes in Buffer	Total number of downlink bytes in the buffer.
BuffOver-limit Uplink Pkts	Total number of uplink packets that were over the buffer limit.
BuffOver-limit Uplink Bytes	Total number of uplink bytes that were over the buffer limit.
BuffOver-limit Downlink Pkts	Total number of downlink packets that were over the buffer limit.
BuffOver-limit Downlink Bytes	Total number of downlink bytes that were over the buffer limit.
Processed Uplink Packets	Total packets processed for upload.
Processed Downlink Packets	Total packets processed for download.
Dropped Uplink Packets	Total packets dropped in uplink direction.
Dropped Downlink Packets	Total packets dropped in downlink direction.
Uplink Out of Order Packets	Total out of order packets in uplink direction.
Downlink Out of Order Packets	Total out of order packets in downlink direction.
ITC Terminated Flows	Total number of flows terminated by Intelligent Traffic Control service.
ITC Redirected Flows	Total number of flows redirected by Intelligent Traffic Control service.
ITC Dropped Packets	Total number of packets dropped by Intelligent Traffic Control service.
ITC ToS Remarked Packets	Total number of packets marked with Type of Service (ToS) by Intelligent Traffic Control service.
R7Gx Dropped Upl Packets	Total number of packets dropped by R7Gx in uplink direction.
R7Gx Dropped Dnl Packets	Total number of packets dropped by R7Gx in downlink direction.
R7Gx Dropped Upl Pkts RuleMatch Fail	Total number of packets dropped by R7Gx in uplink direction due to rulematch failure—no matching rule is found.
R7Gx Dropped Upl Bytes RuleMatch Fail	Total number of bytes dropped by R7Gx in uplink direction due to rulematch failure.
R7Gx Dropped Dnl Pkts RuleMatch Fail	Total number of packets dropped by R7Gx in downlink direction due to rulematch failure.

Field	Description
R7Gx Dropped Dnl Bytes RuleMatch Fail	Total number of bytes dropped by R7Gx in downlink direction due to rulematch failure.
CC Dropped Uplink Packets	Total number of packets dropped by credit control in uplink direction.
CC Dropped Uplink Bytes	Total number of bytes dropped by credit control in uplink direction.
CC Dropped Downlink Packets	Total number of packets dropped by credit control in downlink direction.
CC Dropped Downlink Bytes	Total number of bytes dropped by credit control in downlink direction.
NRUPC Req Made	Total number of Network Requested Update PDP Context (NRUPC) requests made.
NRUPC Req Success	Total number of NRUPC requests succeeded.
NRUPC Req Failed	Total number of NRUPC requests failed.
NRUPC Req Time Out	Total number of NRUPC requests timed out.
Current Readdressed Sessions	Total number of current readdressed sessions.
Total Readdressed Uplink Pkts	Total number of readdressed uplink packets.
Total Readdressed Uplink Bytes	Total number of readdressed uplink bytes.
Total Readdressed Downlink Pkts	Total number of readdressed downlink packets.
Total Readdressed Downlink Bytes	Total number of readdressed downlink bytes.
Total Readdressing Failure Packets	Total number of packets with readdressing failures.
Creation Time	Time display in UTC format.
Last Pkt Time	Time of last packet created.
Duration	Duration of session.
Active Charging Service name	Name of the Active Charging Service.
Rule Base name	Name of the ACS rulebase applied.
Bandwidth Policy	The ACS bandwidth policy applicable for subscriber.
Firewall Policy	Indicates whether Stateful Firewall processing is required for subscriber.
FW-and-NAT Policy	The Stateful Firewall-and-NAT policy applicable for subscriber.
NAT Policy	Indicates whether NAT processing is required for subscriber.
TPO Policy	The TPO policy applicable for subscriber.
CF Policy ID	The Content Filtering policy ID applicable for subscriber.
Dynamic Charging	Status of dynamic charging functionality.
Dynamic Chrg Msg Received	Total number of messages received for dynamic charging.
Rule Definitions Received	Total number of ruledefs received.

■ show active-charging sessions full all

Field	Description
Installs Received	Total number of “Charging-Rule-Install” messages received.
Removes Received	Total number of “Charging-Rule-Remove” messages received.
Installs Succeeded	Total number of charging rules installed successfully.
Installs Failed	Total number of charging rules installation failed.
Removes Succeeded	Total number of charging rules removed successfully.
Removes Failed	Total number of charging rules removal failed.
Uplink Dynamic Rule Packets	Total number of packets uplinked with dynamic rules.
Uplink Dynamic Rule Bytes	Total number of bytes uplinked with dynamic rules.
Downlink Dynamic Rule Packets	Total number of packets downlinked with dynamic rules.
Downlink Dynamic Rule Bytes	Total number of bytes downlinked with dynamic rules.
Dynamic Charging Packet Drop Statistics	
Bearer BW Limit Up Pkts	Total number of uplink packets dropped due to bearer bandwidth limiting.
Bearer BW Limit Dn Pkts	Total number of downlink packets dropped due to bearer bandwidth limiting.
Bearer BW Limit Up Bytes	Total number of uplink bytes dropped due to bearer bandwidth limiting.
Bearer BW Limit Dn Bytes	Total number of downlink bytes dropped due to bearer bandwidth limiting.
PCC Rule BW Limit Up Pkts	Total number of uplink packets dropped due to PCC rule bandwidth limiting.
PCC Rule BW Limit Dn Pkts	Total number of downlink packets dropped due to PCC rule bandwidth limiting.
PCC Rule BW Limit Up Bytes	Total number of uplink bytes dropped due to PCC rule bandwidth limiting.
PCC Rule BW Limit Dn Bytes	Total number of downlink bytes dropped due to PCC rule bandwidth limiting.
PCC Rule Gating Up Pkts	Total number of uplink packets dropped due to PCC rule gating.
PCC Rule Gating Dn Pkts	Total number of downlink packets dropped due to PCC rule gating.
PCC Rule Gating Up Bytes	Total number of uplink bytes dropped due to PCC rule gating.
PCC Rule Gating Dn Bytes	Total number of downlink bytes dropped due to PCC rule gating.
RuleMatch Fail Up Pkts	Total number of uplink packets dropped due to rule match failure.
RuleMatch Fail Dn Pkts	Total number of downlink packets dropped due to rule match failure.
RuleMatch Fail Up Bytes	Total number of uplink bytes dropped due to rule match failure.
RuleMatch Fail Dn Bytes	Total number of downlink bytes dropped due to rule match failure.
Credit-Control	Indicates DCCA status: On/Off
CC Peer	Name of the credit control (CC) peer.
CC Group	Displays the selected credit control group information.
CC Mode	Indicates the credit control mode: RADIUS or DIAMETER
CC Failure Handling	Action configured for credit control failure handling.

Field	Description
CC Session Failover	Credit control session failover status.
CCR-I Server Unreachable Handling	Indicates whether initial-request calls will be continued/terminated when Diameter server(s)/OCS are unreachable.
CCR-U Server Unreachable Handling	Indicates whether update-request calls will be continued/terminated when Diameter server(s)/OCS are unreachable.
Total CCR-U	The total number of CCR-Updates (Credit Control Request with Update) messages sent to the credit control server.
Current TCP Proxy Flows	Total number of current TCP Proxy flows for the session.
Total TCP Proxy Flows	Total number of TCP Proxy flows for the session.
TCP-proxy reset for non-SYN flows	Total number of resets sent by TCP Proxy for flows with no SYN packet after recovery.
Current IP Flows	Total number of current IP flows.
Current ICMP Flows	Total number of current ICMP flows.
Current IPv6 Flows	Total number of current IPv6 flows.
Current ICMPv6 Flows	Total number of current ICMPv6 flows.
Current TCP Flows	Total number of current TCP flows.
Current UDP Flows	Total number of current UDP flows.
Current HTTP Flows	Total number of current HTTP flows.
Current HTTPS Flows	Total number of current HTTPS flows.
Current FTP Flows	Total number of current FTP flows.
Current POP3 Flows	Total number of current POP3 flows.
Current SMTP Flows	Total number of current SMTP flows.
Current SIP Flows	Total number of current SIP flows.
Current RTSP Flows	Total number of current RTSP flows.
Current RTP Flows	Total number of current RTP flows.
Current RTCP Flows	Total number of current RTCP flows.
Current IMAP Flows	Total number of current IMAP flows.
Current WSP-CO Flows	Total number of current WSP-CO flows.
Current WSP-CL Flows	Total number of current WSP-CL flows.
Current MMS Flows	Total number of current MMS flows.
Current DNS Flows	Total number of current DNS flows.
Current PPTP-GRE Flows	Total number of current PPTP-GRE flows.
Current PPTP Flows	Total number of current PPTP flows.

■ show active-charging sessions full all

Field	Description
Current P2P Flows	Total number of current P2P flows.
Current H323 Flows	Total number of current H323 flows.
Current UNKNOWN Flows	Total number of current UNKNOWN flows.
CAE-Readdressing:	
GET Requests redirected	Total number of HTTP GET requests redirected to a CAE.
POST Requests redirected	Total number of HTTP POST requests redirected to a CAE.
Other Requests redirected	Total number of other HTTP requests redirected to a CAE.
HTTP Responses redirected	Total number of HTTP responses redirected to a CAE.
Requests having xheader inserted	Total number of HTTP requests that have x-headers inserted.
Total connection failed to video server	Total number of failed connections to the video server.
Total uplink Bytes	Total number of uplink bytes.
Total uplink Packets	Total number of uplink packets.
Total downlink Bytes	Total number of downlink bytes.
Total downlink Packets	Total number of downlink packets.
STATIC CF STATISTICS	
CF Packets Allowed	Total number of packets allowed after applying content filtering service. NOTE: This statistic has been renamed to Flows Allowed in 12.0 and later releases.
CF Packets Discarded without Responding	Total number of packets discarded without sending any response after applying content filtering service. NOTE: This statistic has been renamed to Flows Discarded in 12.0 and later releases.
CF Packets Discarded with Flow Redirection	Total number of packets discarded with traffic flow redirection after applying content filtering service. NOTE: This statistic has been renamed to Flows Redirected in 12.0 and later releases.
CF Packets Discarded with Flow Termination	Total number of packets discarded and traffic flow terminated after applying content filtering service. NOTE: This statistic has been renamed to Flows Terminated in 12.0 and later releases.
CF Packets Discarded with Flow Content Insertion	Total number of packets discarded and content inserted in response message after applying content filtering service. NOTE: This statistic has been renamed to Flows Discarded with Content Insertion in 12.0 and later releases.
CF Static DB Look-ups	Total number of lookups in static rating database for content filtering service.
CF Successful Cache Look-ups	Total number of lookups in cache memory for static rating of URLs and returned successful after applying content filtering service.
DYNAMIC CF STATISTICS	
Flows Allowed	Total number of flows allowed by dynamic CF. Typically a flow is allowed if the matched flow category contains the action “allow” in the CF configuration.

Field	Description
Flows Discarded	Total number of flows discarded by dynamic CF.
Flows Redirected	Total number of flows redirected by dynamic CF.
Flows Terminated	Total number of flows terminated by dynamic CF.
Flows Discarded with Content Insertion	Total number of flows discarded with content insertion by dynamic CF.
CF Dynamic Lookups	Total number of lookups in dynamic rating database for content filtering service.
Charging ruledef(s) matching the specified criteria	Charging ruledef(s) matching the specified criteria.
Firewall ruledef(s) match the specified criteria	Stateful Firewall ruledef(s) matching the specified criteria.
Dynamic Charging RuleName Statistics	Dynamic charging rule name statistics.
Total Dynamic Rules	Total number of dynamic rules.
Total Predefined Rules	Total number of predefined rules.
Total Firewall Predefined Rules	Total number of Stateful Firewall predefined rules.
Dynamic Charging Rule Definitions Configured	Dynamic charging rules configured.
Total Dynamic Charging Rule Names	Total number of dynamic charging rules.
Total Dynamic Firewall Rule Names	Total number of dynamic Stateful Firewall rules.
Predefined Rules Enabled List	List of enabled predefined rules.
Predefined Firewall Rules Enabled List	List of enabled predefined Firewall rules.
Total acs sessions matching specified criteria	Total number of ACS sessions matching the specified criteria.

show active-charging sessions summary

Table 126. show active-charging sessions summary Command Output Descriptions

Field	Description
Session-ID	The active charging session ID.
Username	Name of the subscriber.
Callid	Call identification.
IMSI/MSID	Indicates the International Mobile Subscriber Identification / Mobile Station ID.
ACSMgr Instance	Total instance of ACS Manager.
ACSMgr Card/Cpu	Total number of ACS Manager Card/CPU.
Client-IP	Indicates the IP address of Client.
SessMgr Instance	Total instance of session manager.
NAS-IP	Indicates the IP address of Network Access Server.
NAS-PORT	Indicates the TCP port of Network Access Server.
Access-NAS-IP(FA)	Indicates the IP address of accessed Network Access Server Foreign Agent (FA).
Acct-Session-ID	Indicates the accounting session ID.
3GPP2-Correlation-ID	Indicates the Mobile IP Correlation ID.
Access-Correlation-ID(FA)	Indicates the access correlation ID for FA.
MEID	Indicates the Mobile equipment's unique Mobile Equipment Identifier (MEID).
Carrier-ID	Indicates the Carrier or service ID.
ESN	Indicates the Electronic Serial Number (ESN) of mobile equipment.
Uplink Bytes	Total bytes uploaded.
Downlink Bytes	Total bytes downloaded.
Uplink Packets	Total packets uploaded.
Downlink Packets	Total packets downloaded.
Injected Uplink Bytes	Total bytes injected to upload.
Injected Downlink Bytes	Total bytes injected to download.
Injected Uplink Packets	Total packets injected to upload.
Injected Downlink Packets	Total packets injected to download.
Uplink Out of Order Packets	Total out of order packets in uplink direction.

Field	Description
Downlink Out of Order Packets	Total out of order packets in downlink direction.
Creation Time	Time display in UTC format.
Last Pkt Time	Time of last packet created.
Duration	Duration of session.
Active Charging Service name	Name of the ACS service.
Rule Base name	Name of the rulebase applied.
Credit-Control	DCCA status: On/Off
CC peer	Name of the Credit Control (CC) peer.
CC Failure Handling	Action configured to handle CC failure.
CC Session Failover	CC Session Failover status.
Rating-Group	Rating-Group of the MSCC which is used by DCCA
State	State in which the MSCC (identified by Rating-Group and Service-Identifier) is present. For example, Charging, Limit-Reached, Rating-Failed, etc.
Pending Update	This indicates whether a response is awaited from the server for this MSCC, after sending a CCR-U.
Last CCA	Time duration from the last sent CCR-Update request for this MSCC.
Time Threshold	Threshold for CC.
Quota	Quota assigned for pre-paid subscriber.
Usage	Usage by subscriber.
RuledefName	Name of the Ruledef.
Pkts-Down	Total packets in downlink direction.
Bytes-Down	Total byte in downlink direction.
Pkts-Up	Total Packets in upward direction.
Bytes-Up	Total bytes in upward direction.
Hits	Total packets in upload and download direction.
Current IP Sessions	Total number of current IP sessions.
Current ICMP Sessions	Total number of current ICMP sessions.
Current IPv6 Sessions	Total number of current IPv6 sessions.
Current ICMPv6 Sessions	Total number of current ICMPv6 sessions.
Current TCP Sessions	Total number of current TCP sessions.
Current UDP Sessions	Total number of current UDP sessions.
Current HTTP Sessions	Total number of current HTTP sessions.

Field	Description
Current HTTPS Sessions	Total number of current HTTPS sessions.
Current FTP Sessions	Total number of current FTP sessions.
Current POP3 Sessions	Total number of current POP3 sessions.
Current SMTP Sessions	Total number of current SMTP sessions.
Current SIP Sessions	Total number of current SIP sessions.
Current RTSP Sessions	Total number of current RTSP sessions.
Current RTP Sessions	Total number of current RTP sessions.
Current RTCP Sessions	Total number of current RTCP sessions.
Current IMAP Sessions	Total number of current IMAP sessions.
Current WSP-CO Sessions	Total number of current WSP-CO sessions.
Current WSP-CL Sessions	Total number of current WSP-CL sessions.
Current MMS Sessions	Total number of current MMS sessions.
Current DNS Sessions	Total number of current DNS sessions.
Current PPTP Sessions	Total number of current PPTP sessions.
Current PPTP-GRE Sessions	Total number of current PPTP-GRE sessions.
Current P2P Sessions	Total number of current P2P sessions.
Current H323 Sessions	Total number of current H323 sessions.
Current TFTP Sessions	Total number of current TFTP sessions.
Current UNKNOWN Sessions	Total number of current UNKNOWN sessions.
Current SKYPE Sessions	Total number of current SKYPE sessions.
Current YAHOO Sessions	Total number of current YAHOO sessions.
 Important: The following voice/non-voice counters are available only for 10.0 and earlier releases.	
Current SKYPE voice Sessions	Total number of current SKYPE voice sessions.
Current YAHOO voice Sessions	Total number of current YAHOO voice sessions.
Current SKYPE non-voice Sessions	Total number of current SKYPE non-voice sessions.
Current YAHOO non-voice Sessions	Total number of current YAHOO non-voice sessions.

Field	Description
 Important: The following two audio counters are available only for 11.0 and later releases.	
Current SKYPE Audio Sessions	Total number of current SKYPE audio sessions.
Current YAHOO Audio Sessions	Total number of current YAHOO audio sessions.
Current YAHOO Video Sessions	Total number of current YAHOO video sessions.
Current EDONKEY Sessions	Total number of current EDONKEY sessions.
Current ORB Sessions	Total number of current ORB sessions.
Current MSN Sessions	Total number of current MSN sessions.
Current GNUTELLA Sessions	Total number of current GNUTELLA sessions.
 Important: The following voice/non-voice counters are available only for 10.0 and earlier releases.	
Current MSN voice Sessions	Total number of current MSN voice sessions.
Current MSN non-voice Sessions	Total number of current MSN non-voice sessions.
Current BITTORRENT Sessions	Total number of current BITTORRENT sessions.
 Important: The following audio/video counters are available only for 11.0 and later releases.	
Current MSN Audio Sessions	Total number of current MSN audio sessions.
Current MSN Video Sessions	Total number of current MSN video sessions.
Current SLINGBOX Sessions	Total number of current SLINGBOX sessions.
Current JABBER Sessions	Total number of current JABBER sessions.
Current WINNY Sessions	Total number of current WINNY sessions.
Current MANOLITO Sessions	Total number of current MANOLITO sessions.
Current PANDO Sessions	Total number of current PANDO sessions.
Current FILETOPIA Sessions	Total number of current FILETOPIA sessions.
Current SOULSEEK Sessions	Total number of current SOULSEEK sessions.
Current PPSTREAM Sessions	Total number of current PPSTREAM sessions.

Field	Description
Current QQ Sessions	Total number of current QQ sessions.
Current QQLIVE Sessions	Total number of current QQLIVE sessions.
Current IMESH Sessions	Total number of current IMESH sessions.
Current MUTE Sessions	Total number of current MUTE sessions.
Current PPLIVE Sessions	Total number of current PPLIVE sessions.
Current GADUGADU Sessions	Total number of current GADUGADU sessions.
Current FEIDIAN Sessions	Total number of current FEIDIAN sessions.
Current APPLEJUICE Sessions	Total number of current APPLEJUICE sessions.
Current fasttrack Sessions	Total number of current Fasttrack sessions.
Current ZATTOO Sessions	Total number of current ZATTOO sessions.
Current SKINNY Sessions	Total number of current SKINNY sessions.
Current SOPCAST Sessions	Total number of current SOPCAST sessions.
Current DIRECTCONNECT Sessions	Total number of current DIRECTCONNECT sessions.
Current ARES Sessions	Total number of current ARES sessions.
Current OSCAR Sessions	Total number of current OSCAR sessions.



Important: The following voice/non-voice counters are available only for 10.0 and earlier releases.

Current OSCAR voice Sessions	Total number of current OSCAR voice sessions.
Current OSCAR non-voice Sessions	Total number of current OSCAR non-voice sessions.



Important: The following two counters are available only for 11.0 and later releases.

Current OSCAR Audio Sessions	Total number of current OSCAR audio sessions.
Current OSCAR Video Sessions	Total number of current OSCAR video sessions.
Current POPO Sessions	Total number of current POPO sessions.
Current IRC Sessions	Total number of current IRC sessions.
Current STEAM Sessions	Total number of current STEAM sessions.

Field	Description
Current DDLINK Sessions	Total number of current DDLINK sessions.
Current HALFLIFE2 Sessions	Total number of current HALFLIFE2 sessions.
Current HAMACHIVPN Sessions	Total number of current HAMACHIVPN sessions.
Current TVANTS Sessions	Total number of current TVANTS sessions.
Current TVUPLAYER Sessions	Total number of current TVUPLAYER sessions.
Current UUSEE Sessions	Total number of current UUSEE sessions.
Current VPNX Sessions	Total number of current VPNX sessions.
Current VTUN Sessions	Total number of current VTUN sessions.
Current WINMX Sessions	Total number of current WINMX sessions.
Current WOFWARCRAFT Sessions	Total number of current WOFWARCRAFT sessions.
Current XBOX Sessions	Total number of current XBOX sessions.
Current ISKOOT Sessions	Total number of current ISKOOT sessions.
Current FRING Sessions	Total number of current FRING sessions.
Current GTALK Sessions	Total number of current GTALK sessions.
 Important: The following voice/non-voice counters are available only for 10.0 and earlier releases.	
Current GTALK voice Sessions	Total number of current GTALK voice sessions.
Current GTALK non-voice Sessions	Total number of current GTALK non-voice sessions.
 Important: The following two counters are available only for 11.0 and later releases.	
Current GTALK Audio Sessions	Total number of current GTALK audio sessions.
Current GTALK Video Sessions	Total number of current GTALK video sessions.
Current OOVOO Sessions	Total number of current OOVOO sessions.
Current FREENET Sessions	Total number of current FREENET sessions.
Current AIMINI Sessions	Total number of current AIMINI sessions.

Field	Description
Current BATTLEFIELD Sessions	Total number of current BATTLEFIELD sessions.
Current OPENFT Sessions	Total number of current OPENFT sessions.
Current QQGAME Sessions	Total number of current QQGAME sessions.
Current QUAKE Sessions	Total number of current QUAKE sessions.
Current SECONDLIFE Sessions	Total number of current SECONDLIFE sessions.
Current ACTIVESYNC Sessions	Total number of current ACTIVESYNC sessions.
Current NIMBUZZ Sessions	Total number of current NIMBUZZ sessions.
Current IAX Sessions	Total number of current IAX sessions.
Current PALTALK Sessions	Total number of current PALTALK sessions.
Current WARCRAFT3 Sessions	Total number of current WARCRAFT3 sessions.
Current IPTV Sessions	Total number of current IPTV sessions.
Current RDP Sessions	Total number of current RDP sessions.
Current PANDORA Sessions	Total number of current PANDORA sessions.
Current ICECAST Sessions	Total number of current ICECAST sessions.
Current KONTIKI Sessions	Total number of current KONTIKI sessions.
Current MEEBO Sessions	Total number of current MEEBO sessions.
Current SHOUTCAST Sessions	Total number of current SHOUTCAST sessions.
Current TRUPHONE Sessions	Total number of current TRUPHONE sessions.
Current THUNDER Sessions	Total number of current THUNDER sessions.
Current ARMAGETTRON Sessions	Total number of current ARMAGETTRON sessions.
Current BLACKBERRY Sessions	Total number of current BLACKBERRY sessions.
Current CITRIX Sessions	Total number of current CITRIX sessions.
Current CLUBPENGUIN Sessions	Total number of current CLUBPENGUIN sessions.
Current CROSSFIRE Sessions	Total number of current CROSSFIRE sessions.
Current DOFUS Sessions	Total number of current DOFUS sessions.
Current FIESTA Sessions	Total number of current FIESTA sessions.
Current FLORENSIA Sessions	Total number of current FLORENSIA sessions.

Field	Description
Current FUNSHION Sessions	Total number of current FUNSHION sessions.
Current GUILDWARS Sessions	Total number of current GUILDWARS sessions.
Current ISAKMP Sessions	Total number of current ISAKMP sessions.
Current MAPLESTORY Sessions	Total number of current MAPLESTORY sessions.
Current MGCP Sessions	Total number of current MGCP sessions.
Current OCTOSHAPE Sessions	Total number of current OCTOSHAPE sessions.
Current OFF Sessions	Total number of current OFF sessions.
Current PS3 Sessions	Total number of current PS3 sessions.
Current RMSTREAM Sessions	Total number of current RMSTREAM sessions.
Current RFACTOR Sessions	Total number of current RFACTOR sessions.
Current SPLASHFIGHTER Sessions	Total number of current SPLASHFIGHTER sessions.
Current SSDP Sessions	Total number of current SSDP sessions.
Current STEALTHNET Sessions	Total number of current STEALTHNET sessions.
Current STUN Sessions	Total number of current STUN sessions.
Current TEAMSPEAK Sessions	Total number of current TEAMSPEAK sessions.
Current TOR Sessions	Total number of current TOR sessions.
Current VEOHTV Sessions	Total number of current VEOHTV sessions.
Current Wii Sessions	Total number of current Wii sessions.
Current WMSTREAM Sessions	Total number of current WMSTREAM sessions.
Current WOFKUNGFU Sessions	Total number of current WOFKUNGFU sessions.
Current XDCC Sessions	Total number of current XDCC sessions.
Current YOURFREEDOM Sessions	Total number of current YOURFREEDOM sessions.
Current FACEBOOK Sessions	Total number of current FACEBOOK sessions.
Current GMAIL Sessions	Total number of current GMAIL sessions.
Current ITUNES Sessions	Total number of current ITUNES sessions.
Current MYSPACE Sessions	Total number of current MYSPACE sessions.

Field	Description
Current TEAMVIEWER Sessions	Total number of current TEAMVIEWER sessions.
Current TWITTER Sessions	Total number of current TWITTER sessions.
Current VIBER Sessions	Total number of current VIBER sessions.
Current SCYDO Sessions	Total number of current SCYDO sessions.
Current WHATSAPP Sessions	Total number of current WHATSAPP sessions.

show active-charging sessions summary type p2p

Table 127. show active-charging sessions summary type p2p Command Output Descriptions

Field	Description
Total Active Charging Sessions	The total number of active charging sessions.
Uplink Bytes	Total bytes uploaded.
Downlink Bytes	Total bytes downloaded.
Uplink Packets	Total packets uploaded.
Downlink Packets	Total packets downloaded.
Current IP Sessions	Total number of current IP sessions.
Current ICMP Sessions	Total number of current ICMP sessions.
Current IPv6 Sessions	Total number of current IPv6 sessions.
Current ICMPv6 Sessions	Total number of current ICMPv6 sessions.
Current TCP Sessions	Total number of current TCP sessions.
Current UDP Sessions	Total number of current UDP sessions.
Current HTTP Sessions	Total number of current HTTP sessions.
Current HTTPS Sessions	Total number of current HTTPS sessions.
Current FTP Sessions	Total number of current FTP sessions.
Current POP3 Sessions	Total number of current POP3 sessions.
Current SMTP Sessions	Total number of current SMTP sessions.
Current SIP Sessions	Total number of current SIP sessions.
Current RTSP Sessions	Total number of current RTSP sessions.
Current RTP Sessions	Total number of current RTP sessions.
Current RTCP Sessions	Total number of current RTCP sessions.
Current IMAP Sessions	Total number of current IMAP sessions.
Current WSP-CO Sessions	Total number of current WSP-CO sessions.
Current WSP-CL Sessions	Total number of current WSP-CL sessions.
Current MMS Sessions	Total number of current MMS sessions.
Current DNS Sessions	Total number of current DNS sessions.
Current PPTP Sessions	Total number of current PPTP sessions.
Current PPTP-GRE Sessions	Total number of current PPTP-GRE sessions.

Field	Description
Current P2P Sessions	Total number of current P2P sessions.
Current H323 Sessions	Total number of current H323 sessions.
Current TFTP Sessions	Total number of current TFTP sessions.
Current UNKNOWN Sessions	Total number of current UNKNOWN sessions.
Current SKYPE Sessions	Total number of current SKYPE sessions.
Current YAHOO Sessions	Total number of current YAHOO sessions.
 Important: The following voice/non-voice counters are available only for 10.0 and earlier releases.	
Current SKYPE voice Sessions	Total number of current SKYPE voice sessions.
Current YAHOO voice Sessions	Total number of current YAHOO voice sessions.
Current SKYPE non-voice Sessions	Total number of current SKYPE non-voice sessions.
Current YAHOO non-voice Sessions	Total number of current YAHOO non-voice sessions.
 Important: The following audio/non-audio counters are available only for 11.0 and later releases.	
Current SKYPE Audio Sessions	Total number of current SKYPE audio sessions.
Current YAHOO Audio Sessions	Total number of current YAHOO audio sessions.
 Important: The following audio/non-audio counters are available only for release 11.0.	
Current SKYPE non-audio Sessions	Total number of current SKYPE non-audio sessions.
Current YAHOO non-audio Sessions	Total number of current YAHOO non-audio sessions.
 Important: The following counter is available only for 12.0 and later releases.	
Current YAHOO Video Sessions	Total number of current YAHOO Video sessions.
Current EDONKEY Sessions	Total number of current EDONKEY sessions.
Current ORB Sessions	Total number of current ORB sessions.
Current MSN Sessions	Total number of current MSN sessions.
Current GNUTELLA Sessions	Total number of current GNUTELLA sessions.

Field	Description
 Important: The following counter is available only for 10.0 and earlier releases.	
Current MSN voice Sessions	Total number of current MSN voice sessions.
 Important: The following counter is available only for 11.0 and later releases.	
Current MSN audio Sessions	Total number of current MSN audio sessions.
Current BITTORRENT Sessions	Total number of current BITTORRENT sessions.
 Important: The following counter is available only for 10.0 and earlier releases.	
Current MSN non-voice Sessions	Total number of current MSN non-voice sessions.
 Important: The following counter is available only for release 11.0.	
Current MSN non-audio Sessions	Total number of current MSN non-audio sessions.
Current MSN Video Sessions	Total number of current MSN video sessions.
Current MSN Unclassified Sessions	Total number of current MSN unclassified sessions.
Current SLINGBOX Sessions	Total number of current SLINGBOX sessions.
Current JABBER Sessions	Total number of current JABBER sessions.
Current WINNY Sessions	Total number of current WINNY sessions.
Current MANOLITO Sessions	Total number of current MANOLITO sessions.
Current PANDO Sessions	Total number of current PANDO sessions.
Current FILETOPIA Sessions	Total number of current FILETOPIA sessions.
Current SOULSEEK Sessions	Total number of current SOULSEEK sessions.
Current PPSTREAM Sessions	Total number of current PPSTREAM sessions.
Current QQ Sessions	Total number of current QQ sessions.
Current QQLIVE Sessions	Total number of current QQLIVE sessions.
Current IMESH Sessions	Total number of current IMESH sessions.
Current MUTE Sessions	Total number of current MUTE sessions.
Current PPLIVE Sessions	Total number of current PPLIVE sessions.

Field	Description
Current GADUGADU Sessions	Total number of current GADUGADU sessions.
Current FEIDIAN Sessions	Total number of current FEIDIAN sessions.
Current APPLEJUICE Sessions	Total number of current APPLEJUICE sessions.
Current FASTTRACK Sessions	Total number of current FASTTRACK sessions.
Current ZATTOO Sessions	Total number of current ZATTOO sessions.
Current SKINNY Sessions	Total number of current SKINNY sessions.
Current SOPCAST Sessions	Total number of current SOPCAST sessions.
Current DIRECTCONNECT Sessions	Total number of current DIRECTCONNECT sessions.
Current ARES Sessions	Total number of current ARES sessions.
Current OSCAR Sessions	Total number of current OSCAR sessions.
 Important: The following voice/non-voice counters are available only for 10.0 and earlier releases.	
Current OSCAR voice Sessions	Total number of current OSCAR voice sessions.
Current OSCAR non-voice Sessions	Total number of current OSCAR non-voice sessions.
 Important: The following audio/non-audio counters are available only for release 11.0 and later releases.	
Current OSCAR Audio Sessions	Total number of current OSCAR audio sessions.
Current OSCAR Video Sessions	Total number of current OSCAR video sessions.
Current POPO Sessions	Total number of current POPO sessions.
Current IRC Sessions	Total number of current IRC sessions.
Current STEAM Sessions	Total number of current STEAM sessions.
Current DDLINK Sessions	Total number of current DDLINK sessions.
Current HALFLIFE2 Sessions	Total number of current HALFLIFE2 sessions.
Current HAMACHIVPN Sessions	Total number of current HAMACHIVPN sessions.
Current TVANTS Sessions	Total number of current TVANTS sessions.
Current TVUPLAYER Sessions	Total number of current TVUPLAYER sessions.
Current UUSEE Sessions	Total number of current UUSEE sessions.
Current VPNX Sessions	Total number of current VPNX sessions.
Current VTUN Sessions	Total number of current VTUN sessions.
Current WINMX Sessions	Total number of current WINMX sessions.

Field	Description
Current WOFWARCRAFT Sessions	Total number of current WOFWARCRAFT sessions.
Current XBOX Sessions	Total number of current XBOX sessions.
Current ISKOOT Sessions	Total number of current ISKOOT sessions.
Current FRING Sessions	Total number of current FRING sessions.
Current GTALK Sessions	Total number of current GTALK sessions.
 Important: The following voice/non-voice counters are available only for 10.0 and earlier releases.	
Current GTALK voice Sessions	Total number of current GTALK voice sessions.
Current GTALK non-voice Sessions	Total number of current GTALK non-voice sessions.
 Important: The following audio/non-audio counters are available only for 11.0 and later releases.	
Current GTALK Audio Sessions	Total number of current GTALK Audio sessions.
Current GTALK Video Sessions	Total number of current GTALK video sessions.
Current OOVOO Sessions	Total number of current OOVOO sessions.
Current FREENET Sessions	Total number of current FREENET sessions.
Current AIMINI Sessions	Total number of current AIMINI sessions.
Current BATTLEFIELD Sessions	Total number of current BATTLEFIELD sessions.
Current OPENFT Sessions	Total number of current OPENFT sessions.
Current QGAME Sessions	Total number of current QGAME sessions.
Current QUAKE Sessions	Total number of current QUAKE sessions.
Current SECONDLIFE Sessions	Total number of current SECONDLIFE sessions.
Current ACTIVESYNC Sessions	Total number of current ACTIVESYNC sessions.
Current NIMBUZZ Sessions	Total number of current NIMBUZZ sessions.
Current IAX Sessions	Total number of current IAX sessions.
Current PALTALK Sessions	Total number of current PALTALK sessions.
Current WARCRAFT3 Sessions	Total number of current WARCRAFT3 sessions.
Current IPTV Sessions	Total number of current IPTV sessions.
Current RDP Sessions	Total number of current RDP sessions.
Current PANDORA Sessions	Total number of current PANDORA sessions.
Current ICECAST Sessions	Total number of current ICECAST sessions.

Field	Description
Current KONTIKI Sessions	Total number of current KONTIKI sessions.
Current MEEBO Sessions	Total number of current MEEBO sessions.
Current SHOUTCAST Sessions	Total number of current SHOUTCAST sessions.
Current TRUPHONE Sessions	Total number of current TRUPHONE sessions.
Current THUNDER Sessions	Total number of current THUNDER sessions.
Current ARMAGETTRON Sessions	Total number of current ARMAGETTRON sessions.
Current BLACKBERRY Sessions	Total number of current BLACKBERRY sessions.
Current CITRIX Sessions	Total number of current CITRIX sessions.
Current CLUBPENGUIN Sessions	Total number of current CLUBPENGUIN sessions.
Current CROSSFIRE Sessions	Total number of current CROSSFIRE sessions.
Current DOFUS Sessions	Total number of current DOFUS sessions.
Current FIESTA Sessions	Total number of current FIESTA sessions.
Current FLORENSIA Sessions	Total number of current FLORENSIA sessions.
Current FUNSHION Sessions	Total number of current FUNSHION sessions.
Current GUILDWARS Sessions	Total number of current GUILDWARS sessions.
Current ISAKMP Sessions	Total number of current ISAKMP sessions.
Current MAPLESTORY Sessions	Total number of current MAPLESTORY sessions.
Current MGCP Sessions	Total number of current MGCP sessions.
Current OCTOSHAPE Sessions	Total number of current OCTOSHAPE sessions.
Current OFF Sessions	Total number of current OFF sessions.
Current PS3 Sessions	Total number of current PS3 sessions.
Current RMSTREAM Sessions	Total number of current RMSTREAM sessions.
Current RFACTOR Sessions	Total number of current RFACTOR sessions.
Current SPLASHFIGHTER Sessions	Total number of current SPLASHFIGHTER sessions.
Current SSDP Sessions	Total number of current SSDP sessions.
Current STEALTHNET Sessions	Total number of current STEALTHNET sessions.
Current STUN Sessions	Total number of current STUN sessions.
Current TEAMSPEAK Sessions	Total number of current TEAMSPEAK sessions.
Current TOR Sessions	Total number of current TOR sessions.
Current VEOHTV Sessions	Total number of current VEOHTV sessions.
Current WII Sessions	Total number of current WII sessions.
Current WMSTREAM Sessions	Total number of current WMSTREAM sessions.

Field	Description
Current WOFKUNGFU Sessions	Total number of current WOFKUNGFU sessions.
Current XDCC Sessions	Total number of current XDCC sessions.
Current YOURFREEDOM Sessions	Total number of current YOURFREEDOM sessions.
Current FACEBOOK Sessions	Total number of current FACEBOOK sessions.
Current GMAIL Sessions	Total number of current GMAIL sessions.
Current ITUNES Sessions	Total number of current ITUNES sessions.
Current MYSPACE Sessions	Total number of current MYSPACE sessions.
Current TEAMVIEWER Sessions	Total number of current TEAMVIEWER sessions.
Current TWITTER Sessions	Total number of current TWITTER sessions.
Current VIBER Sessions	Total number of current VIBER sessions.
Current SCYDO Sessions	Total number of current SCYDO sessions.
Current WHATSAPP Sessions	Total number of current WHATSAPP sessions.

show active-charging subsystem all

Table 128. show active-charging subsystem all Command Output Descriptions

Field	Description
Total ACS Managers	Total number of Active Charging Service managers running on the system.
Session Creation Succ	Total number of sessions created successfully.
Session Creation Fail	Total number of session creation failures.
Total subscribers	Total number of subscribers configured on system.
Current subscribers	Total number of subscriber active on system.
Total CF subscribers	Total number of Content Filtering subscribers configured on the system.
Current CF subscribers	Total number of Content Filtering subscribers active on the system.
Total Flows Connected	Total number of flows connected.
Total Flows Disconnected	Total number of flows disconnected.
Total Uplink Pkts	Total number of packets uplinked.
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Pkts	Total number of packets downlinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total ICMP flows	Total number of ICMP flows.
Current ICMP flows	Total number of current ICMP flows.
Total ICMPv6 flows	Total number of ICMPv6 flows.
Current ICMPv6 flows	Total number of current ICMPv6 flows.
Total TCP flows	Total number of TCP flows.
Current TCP flows	Total number of current TCP flows.
Total UDP flows	Total number of UDP flows.
Current UDP flows	Total number of current UDP flows.
Total DNS flows	Total number of DNS flows.
Current DNS flows	Total number of current DNS flows.
Total FTP flows	Total number of FTP flows.
Current FTP flows	Total number of current FTP flows.
Total HTTP flows	Total number of HTTP flows.
Current HTTP flows	Total number of current HTTP flows.

Field	Description
Total HTTPS flows	Total number of HTTPS flows.
Current HTTPS flows	Total number of current HTTPS flows.
Total POP3 flows	Total number of POP3 flows.
Current POP3 flows	Total number of current POP3 flows.
Total SMTP flows	Total number of SMTP flows.
Current SMTP flows	Total number of current SMTP flows.
Total SIP flows	Total number of SIP flows.
Current SIP flows	Total number of current SIP flows.
Total RTSP flows	Total number of RTSP flows.
Current RTSP flows	Total number of current RTSP flows.
Total RTP flows	Total number of RTP flows.
Current RTP flows	Total number of current RTP flows.
Total RTCP flows	Total number of RTCP flows.
Current RTCP flows	Total number of current RTCP flows.
Total IMAP flows	Total number of IMAP flows.
Current IMAP flows	Total number of current IMAP flows.
Total WSP-CO flows	Total number of WSP-CO flows.
Current WSP-CO flows	Total number of current WSP-CO flows.
Total WSP-CL flows	Total number of WSP-CL flows.
Current WSP-CL flows	Total number of current WSP-CL flows.
Total MMS flows	Total number of MMS flows.
Current MMS flows	Total number of current MMS flows.
Total TFTP flows	Total number of TFTP flows.
Current TFTP flows	Total number of current TFTP flows.
Total PPTP flows	Total number of PPTP flows.
Current PPTP flows	Total number of current PPTP flows.
Total PPTP-GRE flows	Total number of PPTP-GRE flows.
Current PPTP-GRE flows	Total number of current PPTP-GRE flows.
Total H323 flows	Total number of H323 flows.
Current H323 flows	Total number of current H323 flows.
Total P2P flows	Total number of P2P flows.
Current P2P flows	Total number of current P2P flows.

■ show active-charging subsystem all

Field	Description
Total P2P Voice flows	Total number of P2P voice flows.
Total video flows paced	Total number of TCP video flows paced.
Current video flows paced	Total number of current TCP video flows paced.
Current P2P Voice flows	Total number of current P2P voice flows.
Total Rule-Hits	Total number of rule hits.
Total Readdr flows	Total number of re-addressed flows.
Current Readdr flows	Total number of current re-addressed flows.
Total P2P Sessions	Total number of P2P sessions formed from start.
Total PP Rule-Hits	Total number of Post-processing rule hits.
Total P2P Subscribers	Total number of P2P subscribers.
Total Firewall Subscribers	Total number of Firewall subscribers. NOTE: This statistic is obsolete in 11.0 and later releases.
Total NAT Subscribers	Total number of Network Address Translation subscribers. NOTE: This statistic is obsolete in 11.0 and later releases.
Total Blacklisted URL hits	Total number of Blacklisted URL hits.
Total Blacklisted URL misses	Total number of Blacklisted URL misses.
Total Readdr flows	Total number of readdressed flows.
Current Readdr flows	Current number of readdressed flows.
Total URLs Outstanding for Rating (SRDB)	Total number of URLs outstanding for Static Rating Database rating.
Firewall/NAT Subscribers:	
Firewall IPv4 Enabled	Displays the total and the active number of subscribers with IPv4 Firewall enabled.
Firewall IPv6 Enabled	Displays the total and the active number of subscribers with IPv6 Firewall enabled.
NAT Enabled	Displays the total and the active number of subscribers with NAT enabled. NOTE: This statistic is available only from releases 11.0 to 12.1.
Firewall and NAT Enabled	Displays the total and the active number of subscribers with IPv4 or IPv6 Firewall and NAT enabled.
Fair Usage Statistics:	
CPU Credits (used/max)	Number of CPU credits used and maximum number of CPU credits.
RADIUS Prepaid Statistics	Indicates the group of statistics for RADIUS prepaid session.
Total prepaid sess	Total number of active/dormant/inactive prepaid sessions.
Current prepaid sess	Total number of prepaid sessions currently active.
Total prepaid auth req	Total number of AAA authorization requests for prepaid sessions.
Total prepaid auth success	Total number of successful AAA authorization for prepaid sessions.

Field	Description
Total prepaid auth fail	Total number of failed AAA authorization for prepaid sessions.
Total prepaid errors	Total number of errors occurred in prepaid sessions.
Content Filtering URL Cache Statistics	Indicates URL caching statistics for Content Filtering.
Total cached entries	Total number of cached entries in memory.
Total hits	Total number of attempts to access URLs which are cached in memory with rating.
Total misses	Total number of attempts failed to access URLs which are cached in memory with rating.
Total has-path hits	Total number of attempts to access URLs which are cached in memory with rating with specified path.
Total flushes	total number of flushing of URL cache to clear memory with stale URL list and rating.
Total URLs not cached	Total number of URLs accessed but not cached in memory.
Total Cache size	Total cache size adding maximum cache size for all volume provided for URLs caching.
Percentage Full	Indicates the percentage of memory used out of allocated space for URL caching.
Last Flush request received Time	Indicates the time of last flush request received for cache flushing.
Total Control Pkts Rx	Total number of control packets received.
Total Control Pkts Tx	Total number of control packets transmitted.
Data statistics	Statistics of data flow.
Receive Pkts	Total number of packets received in different size based frequency
Transmit pkts	Total number of packets transmitted in different size based frequency
User Data statistics	Indicates the group of statistics of user data traffic.
Data octets from User	Total number of bytes originated from user.
Data packets from User	Total number of data packets originated from user.
Data octets to User	Total number of bytes sent to user.
Data packets to User	Total number of data packets sent to user.
EDR/UDR statistics	
Records Generated	The total number of EDR/UDR records generated.
Msgs sent to CDRMOD	The total number of EDR/UDR messages sent to CDRMOD.
Records sent to CDRMOD	The total number of EDR/UDR records sent to CDRMOD.
Msgs bounced from CDRMOD	The total number of EDR/UDR messages that were bounced from CDRMOD.
Records bounced from CDRMOD	The total number of EDR/UDR records that were bounced from CDRMOD.
Successful Msgs sent to CDRMOD	The total number of successful EDR/UDR messages that were sent to CDRMOD.
Successful records sent to CDRMOD	The total number of successful EDR/UDR records that were sent to CDRMOD.

■ show active-charging subsystem all

show active-charging subsystem facility acsmgr instance

Table 129. show active-charging subsystem facility acsmgr instance Command Output Descriptions

Field	Description
ACSMgr Instance	The ACS Manager instance.
Card/CPU	The card and CPU ID.
Session Creation Succ	Total number of sessions created successfully.
Session Creation Fail	Total number of session creation failures.
Total subscribers	Total number of subscribers configured on system.
Current subscribers	Total number of subscriber active on system.
Total CF subscribers	Total number of Content Filtering subscribers configured on the system.
Current CF subscribers	Total number of Content Filtering subscribers active on the system.
Total Flows Connected	Total number of flows connected.
Total Flows Disconnected	Total number of flows disconnected.
Total Uplink Pkts	Total number of packets uplinked.
Total Uplink Bytes	Total number of bytes uplinked.
Total Downlink Pkts	Total number of packets downlinked.
Total Downlink Bytes	Total number of bytes downlinked.
Total ICMP flows	Total number of ICMP flows.
Current ICMP flows	Total number of current ICMP flows.
Total ICMPv6 flows	Total number of ICMPv6 flows.
Current ICMPv6 flows	Total number of current ICMPv6 flows.
Total TCP flows	Total number of TCP flows.
Current TCP flows	Total number of current TCP flows.
Total UDP flows	Total number of UDP flows.
Current UDP flows	Total number of current UDP flows.
Total DNS flows	Total number of DNS flows.
Current DNS flows	Total number of current DNS flows.
Total FTP flows	Total number of FTP flows.
Current FTP flows	Total number of current FTP flows.
Total HTTP flows	Total number of HTTP flows.

Field	Description
Current HTTP flows	Total number of current HTTP flows.
Total HTTPS flows	Total number of HTTPS flows.
Current HTTPS flows	Total number of current HTTPS flows.
Total POP3 flows	Total number of POP3 flows.
Current POP3 flows	Total number of current POP3 flows.
Total SMTP flows	Total number of SMTP flows.
Current SMTP flows	Total number of current SMTP flows.
Total SIP flows	Total number of SIP flows.
Current SIP flows	Total number of current SIP flows.
Total RTSP flows	Total number of RTSP flows.
Current RTSP flows	Total number of current RTSP flows.
Total RTP flows	Total number of RTP flows.
Current RTP flows	Total number of current RTP flows.
Total RTCP flows	Total number of RTCP flows.
Current RTCP flows	Total number of current RTCP flows.
Total IMAP flows	Total number of IMAP flows.
Current IMAP flows	Total number of current IMAP flows.
Total WSP-CO flows	Total number of WSP-CO flows.
Current WSP-CO flows	Total number of current WSP-CO flows.
Total WSP-CL flows	Total number of WSP-CL flows.
Current WSP-CL flows	Total number of current WSP-CL flows.
Total MMS flows	Total number of MMS flows.
Current MMS flows	Total number of current MMS flows.
Total TFTP flows	Total number of TFTP flows.
Current TFTP flows	Total number of current TFTP flows.
Total PPTP flows	Total number of PPTP flows.
Current PPTP flows	Total number of current PPTP flows.
Total PPTP-GRE flows	Total number of PPTP-GRE flows.
Current PPTP-GRE flows	Total number of current PPTP-GRE flows.
Total H323 flows	Total number of H323 flows.
Current H323 flows	Total number of current H323 flows.
Total P2P flows	Total number of P2P flows.

Field	Description
Current P2P flows	Total number of current P2P flows.
Total Rule-Hits	Total number of rule hits.
Blacklisted URL hits	The number of Blacklisted URL hits.
Blacklisted URL misses	The number of Blacklisted URL misses.
Total URLs Outstanding for Rating (SRDB)	Total number of URLs outstanding for Static Rating Database rating.
Firewall/NAT Subscribers:	
Firewall IPv4 Enabled	Displays the total and the active number of subscribers with IPv4 Firewall enabled.
Firewall IPv6 Enabled	Displays the total and the active number of subscribers with IPv6 Firewall enabled.
NAT44 Enabled	Displays the total and the active number of subscribers with NAT44 enabled.
Firewall and NAT Enabled	Displays the total and the active number of subscribers with IPv4 or IPv6 Firewall and NAT enabled.
RADIUS Prepaid Statistics: Indicates the group of statistics for RADIUS prepaid session.	
Total prepaid sess	Total number of active/dormant/inactive prepaid sessions.
Current prepaid sess	Total number of prepaid sessions currently active.
Total prepaid auth req	Total number of AAA authorization requests for prepaid sessions.
Total prepaid auth success	Total number of successful AAA authorization for prepaid sessions.
Total prepaid auth fail	Total number of failed AAA authorization for prepaid sessions.
Total prepaid errors	Total number of errors occurred in prepaid sessions.
Content Filtering Policy <policy> for Service <service> Matched	
Content Filtering URL Cache Statistics	Indicates the group of statistics of URL caching for content filtering service.
Total cached entries	Total number of cached entries in memory.
Total hits	Total number of attempts to access URLs which are cached in memory with rating.
Total misses	Total number of attempts failed to access URLs which are cached in memory with rating.
Total has-path hits	Total number of attempts to access URLs which are cached in memory with rating with specified path.
Total flushes	Total number of flushing of URL cache to clear memory with stale URL list and rating.
Total Cache size(all volumes)	Total cache size adding maximum cache size for all volume provided for URLs caching.
Percentage Full	Indicates the percentage of memory used out of allocated space for URL caching.
Last Flush request received time	Indicates the time of last flush request received for cache flushing.
Volume - <volume>	The volume.
Cached entries	For the volume, indicates the total number of cached entries in memory.

■ show active-charging subsystem facility acsmgr instance

Field	Description
Hits	For the volume, indicates the total number of attempts failed to access URLs which are cached in memory with rating.
Misses	For the volume, indicates the total number of attempts failed to access URLs which are cached in memory with rating.
has-path hits	For the volume, indicates the total number of attempts to access URLs which are cached in memory with rating with specified path.
Flushes	For the volume, indicates the total number of times the URL cache has been flushed to clear memory with stale URL list and rating.
Percentage Full	For the volume, indicates the percentage of memory used out of allocated space for URL caching.
Last Access Time	For the volume, indicates the last access time.
Last Flush Time	For the volume, indicates the last flush time.
Data statistics	
ReceivePkts	Total number of packets received.
Transmit Pkts	Total number of packets transmitted.

show active-charging tcp-proxy statistics all verbose

Table 130. show active-charging tcp-proxy statistics all verbose Command Output Descriptions

Field	Description
TCP Proxy Stack Statistics	
Statistics	
Cumulative Statistics	
Total Pkts to Stack	Total number of packets received by stack.
Total Bytes to Stack	Total number of bytes received by stack.
Total Pkts from Stack	Total number of packets sent from stack.
Total Bytes from Stack	Total number of bytes sent from stack.
API Statistics	
Total Sockets Opened	Total number of sockets opened.
Socket Open Failed	Total number of sockets open failures.
Total Connect Attempts	Total number of connection attempts.
Total Listening Sockets	Total number of sockets listening.
Socket Listening Failed	Total number of sockets listening failures.
Socket Bind Success	Total number of socket binds successful.
Socket Accept Success	Total number of socket accepts successful.
Socket Accept Failed	Total number of socket accept failures.
Total Send Success	Total number of sends successful.
Total Send Failed	Total number of send failures.
Total Send Partial Succ	Total number of sends partially successful.
Total SendTo Success	Total number of send to successful.
Total SendTo Failed	Total number of send to failures.
Total SendTo Partil Succ	Total number of send to partially successful.
Total Recv Attempted	Total number of Recv attempted.
Total Recv Fail	Total number of Recv failures.
Total RecvFrom Attempted	Total number of RecvFrom attempted.
Total RecvFrom Fail	Total number of RecvFrom failures.
Current Open Sockets	Total number of sockets currently open.

■ show active-charging tcp-proxy statistics all verbose

Field	Description
IP Layer Statistics	
Total Pkts Recvd at IP	Total number of packets received at IP layer.
Header Errors	Total number of IP header errors.
Unknown Protocol	Total number of unknown IP protocol errors.
Incoming Discarded Pkts	Total number of incoming packets discarded.
Outgoing Requests	Total number of outgoing requests.
Outgoing Discarded Pkts	Total number of outgoing discarded packets.
Reassembly Timeouts	Total number of reassembly timeouts.
Reassembly Success	Total number of IP datagrams that were reassembled successfully.
Fragmentation Success	Total number of IP datagrams that were fragmented successfully.
Fragmentation Fails	Total number of IP datagrams that were discarded due to fragmentation failures.
Fragments Created	Total number of fragments created.
TCP Layer Statistics	
Incoming TCP Segments	Total number of incoming segments received at TCP layer.
Incoming TCP Bytes	Total number of incoming bytes received at TCP layer.
Incoming TCP Error Seg	Total number of incoming segments containing some error.
In TCP Retrans Seg	Total number of incoming TCP retransmitted segments.
In TCP Retrans Byte	Total number of incoming TCP retransmitted bytes.
Outgoing TCP Data Seg	Total number of outgoing TCP segments having some data.
Outgoing TCP Reset Seg	Total number of outgoing TCP resets.
Outgoing TCP Retrans Seg	Total number of packets retransmitted by the stack.
In TCP Partial Retr Seg	Total number of incoming TCP partial retransmitted segments.
In TCP Partial Retr Byte	Total number of incoming TCP partial retransmitted bytes.
In TCP OOO Segments	Total number of incoming TCP Out-of-Order segments.
In TCP OOO Bytes	Total number of incoming TCP Out-of-Order bytes.
In TCP OOO+Retrans Seg	Total number of incoming TCP Out-of-Order+retransmitted segments.
In TCP OOO+Retrans Bytes	Total number of incoming TCP Out-of-Order+retransmitted bytes.
In TCP OOO Succ Seg	Total number of incoming TCP Out-of-Order Succ segments.
In TCP OOO Succ Bytes	Total number of incoming TCP Out-of-Order Succ bytes.
In TCP Csum Err Seg	Total number of incoming TCP checksum error segments.
In TCP Csum Err Bytes	Total number of incoming TCP checksum error bytes.
Active Open	Total number of active connections initiated by the stack.

Field	Description
Passive Open	Total number of connections accepted by the stack.
Connection Failure	Total number failed connections.
Reset in Est State	Total number of resets received in Established state.
Current Est Connections	Total number of active established connections.
TCP Proxy Statistics for Rulebase	
Cumulative TCP proxy Statistics for Rulebase:	
Total Proxy Flows	Total number of TCP Proxy flows in this rulebase.
Current Proxy Flows	Total no of current TCP Proxy flows in this rulebase.
Uplink TCP Proxy:	
Pkts received from uplink	Total number of uplink packets on Gn interface.
Pkts forwarded to application	Total number uplink packets forwarded by stack to TCP Proxy application.
Pkts received from application	Total number uplink packets received from TCP Proxy application to stack.
Pkts for transmission to uplink	Total number uplink packets sent by stack on Gi interface.
Pkts received after connection with server	Total number uplink packets received after connection with server.
Pkts received before connection with server	Total number uplink packets received before connection with server.
Number of connect tried	Total number times the connect was called.
Downlink TCP Proxy:	
Pkts received from downlink	Total number of downlink packets on Gi interface.
Pkts forwarded to application	Total number downlink packets forwarded by stack to TCP Proxy application.
Pkts received from application	Total number downlink packets received from TCP Proxy application to stack.
Pkts for transmission to downlink	Total number downlink packets from application on Gn interface.
Pkts received after connection with client	Total number of downlink packets received after connection with client.
Pkts received before connection with client	Total number downlink packets received before connection with client.
Number of connect tried	Total number times the connect was called.
Downlink and uplink TCP proxy events:	
Total received failed	Total number of Recv calls failed.
Total error received	Total number of socket errors.
Total reset received	Total number of RESETs received (both from Gn and Gi side).
Total remote closed received	Total number of Remote Close events occurred (both from Gn and Gi side).
Total close complete received	Total number of Remote Close Complete events occurred (both from Gn and Gi side).
Total accept received	Total number of accept events received (both from Gn and Gi side).

■ show active-charging tcp-proxy statistics all verbose

Field	Description
Total accept failed	Total number of accept requests failed.
Total registerCB failed	Total number of calls to registerCB function failed.
Total recv occurred	Total number of Recv events occurred.
Total connect complete received	Total number of connect complete events occurred.
Total send failed	Total number of calls to send function failed.
Proxy Session counters:	
Current Connecting Conn (AO on GN)	Total number of current connecting connections active open on GN.
Current Connecting Conn (AO on GI)	Total number of current connecting connections active open on GI.
Current Connected Conn (AO on GN)	Total number of current connected connections active open on GN.
Current Connected Conn (AO on GI)	Total number of current connected connections active open on GI.
Current Un-Accepted Conn (PO on GN)	Total number of current unaccepted connections passive open on GN.
Current Un-Accepted Conn (PO on GI)	Total number of current unaccepted connections passive open on GI.
Current Accepted Conn (PO on GN)	Total number of current accepted connections passive open on GN.
Current Accepted Conn (PO on GI)	Total number of current accepted connections passive open on GI.
Current EST conn on both side	Total number of current EST connections on both side.
Total PO Succ on GN	Total number of passive open successful on GN.
Total AO Succ on GI	Total number of active open successful on GI.
Total PO Succ on GI	Total number of passive open successful on GI.
Total AO Succ on GN	Total number of active open successful on GN.
Flows not proxied - Proxy flow limit	Total number of flows not proxied due to proxy flow limit.
Flows not proxied - Backlog limit	Total number of flows not proxied due to backlog limit.
Flows not proxied - Gn sock limit	Total number of flows not proxied due to Gn sock limit.
Flows not proxied - Gi sock limit	Total number of flows not proxied due to Gi sock limit.
Flows cleared - incomplete active open	Total number of flows cleared due to incomplete active open.
Flows cleared - incomplete passive open	Total number of flows cleared due to incomplete passive open.
Proxy Error counters:	
Socket Open Failed	Socket open failed statistics on Gn and Gi.
Socket Error Events	Socket error event statistics on Gn and Gi.

show active-charging tcp-proxy statistics socket-migration

Table 131. show active-charging tcp-proxy statistics socket-migration Command Output Descriptions

Field	Description
Socket Migration Statistics	
Cumulative Statistics	
Total Flows Initialized	Total number of flows for which Socket Migration was initialized.
Total Flows Migration Attempt	Total number of flows for which socket migration was started.
Total Flows Success	Total number of flows for which socket migration was successful.
Total Flows Failed	Total number of flows for which socket migration failed with reason.
Memory Alloc Failed	Total number of flows for which socket migration failed due to memory allocation failure.
Permission Denied	Total number of flows for which socket migration failed due to permission denials.
Possible TCP State Change	Total number of flows for which socket migration failed due to possible TCP state change.
Pkt Trimming Failed	Total number of flows for which socket migration failed due to packet trimming failures.
Others	Total number of flows for which socket migration failed due to other reasons.
Total Pkts Trimmed	Total number of packets trimmed during stabilization phase.
Current Statistics	
Current Socket Migrated Flows	Number of current flows for which socket migration is activated.
Flows in Init State	Number of current flows that are in Init state.
Flows in Pre-mig State	Number of current flows that are in Pre-migration state.
Flows in Mig Started State	Number of current flows that are in Migration Started state.
Flows in Post-Mig State	Number of current flows that are in Post Migration state.
Flows in Mig-Done State	Number of current flows that are in Migration Completed state.
Flows in Cant-Do State	Number of current flows that are in Migration Can't be Done state.

show active-charging timedef all

Table 132.show active-charging timedef all Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
TimedefName	Name of the time definition.
Start Day	Start day configured for each timeslot in the timedef. If the day is not configured, shows “Daily”.
Start Time	Start time configured for each timeslot in the timedef.
End Day	End day configured for each timeslot in the timedef. If the day is not configured, shows “Daily”.
End Time	End time configured for each timeslot in the timedef.
Total timedef(s) found	The total number of timedefs found.

show active-charging tpo profile statistics name

Table 133. show active-charging tpo profile statistics name <tpo_profile_name> Command Output Descriptions

Field	Description
TPO profile name	Name of the TPO profile.
Number of TPO enabled flows	Number of TPO-enabled flows.
Number of times TPO is disabled by P2P	Number of times TPO optimizations were disabled due to detection of P2P flows.
Number of times the TPO profile is selected	Number of times the TPO profile was selected.
TCP optimization statistics:	
Number of optimized flows	Total number of TCP optimized flows.
Total bytes transferred	Total number of bytes transferred.
Total bytes retransmitted	Total number of bytes retransmitted.
Total transfer duration(in ms)	Total transfer duration, in ms.
Average goodput(in kB/s)	The average goodput, in kb/s.
Total bytes transferred during slow start	Total number of bytes transferred during Slow Start phase.
Total slow start duration(in ms)	Total slow start duration, in ms.
Average goodput during slow start(in kB/s)	The average goodput during slow start, in kb/s.
Total bytes transferred during congestion avoidance	Total number of bytes transferred during congestion avoidance phase.
Total congestion avoidance duration(in ms)	Total congestion avoidance duration, in ms.
Average goodput during congestion avoidance(in kB/s)	The average goodput during congestion avoidance, in kb/s.
Average connection setup time(in ms)	The average connection setup time, in ms.
Connections with max throughput not achieved during initial window	Total number of connections with maximum throughput not achieved during initial window.
Limited by receive window on mobile	Total number of connections with maximum throughput not achieved due to limited receive window on the mobile client.
Limited by data unavailability	Total number of connections with maximum throughput not achieved due to unavailability of data.
Congestion Control Algorithm:	
Number of times basic is enabled	Total number of times Basic congestion control algorithm was enabled.
Number of times vegas is enabled	Total number of times the Vegas congestion control algorithm was enabled.

■ show active-charging tpo profile statistics name

Field	Description
Number of times westwood-plus is enabled	Total number of times the Westwood Plus congestion control algorithm was enabled.
Number of data segments sent	Total number of data segments sent.
Number of data segments received	Total number of data segments received.
Number of ACKs sent	Total number of ACKs sent.
Number of ACKs received	Total number of ACKs received.
Number of duplicate ACKs sent	Total number of duplicate ACKs sent.
Number of duplicate ACKs received	Total number of duplicate ACKs received.
Number of RTO timeouts	Total number of RTO timeouts.
Number of Fast retransmissions	Total number of Fast Retransmissions.
HTTP url-rewrite statistics:	
Number of optimized flows	Total number of optimized flows.
Number of non-optimized flows	Total number of non-optimized flows.
Due to content-type	Total number of non-optimized flows due to content type.
Due to response code	Total number of non-optimized flows due to response code.
Due to content encoding	Total number of non-optimized flows due to content encoding.
Due to in-sufficient system resources	Total number of non-optimized flows due to insufficient system resources.
Due to request-type	Total number of non-optimized flows due to request type.
Number of tags parsed	Total number of tags parsed.
Number of DNS resolutions	Total number of DNS resolutions.
Resolved locally	Total number of DNS resolutions resolved locally.
Resolved Remotely	Total number of DNS resolutions resolved remotely.
Resolution failures	Total number of DNS resolution failures.
Total Number of bytes added to URL	Total number of bytes added to URL.
Average Number of bytes added per flow	The average number of bytes added per flow.
HTTP compression statistics:	
Number of optimized flows	Total number of optimized flows.
Number of non-optimized flows	Total number of non-optimized flows.
Due to content-type	Total number of non-optimized flows due to content type.
Due to response code	Total number of non-optimized flows due to response code.
Due to content encoding	Total number of non-optimized flows due to content encoding.
Due to client not supporting compression	Total number of non-optimized flows due to client not supporting compression.

Field	Description
Due to in-sufficient system resources	Total number of non-optimized flows due to insufficient system resources.
Due to request-type	Total number of non-optimized flows due to request type.
Number of IN bytes	Total number of incoming bytes.
Number of OUT bytes	Total number of outgoing bytes.
Average Compression Gain	The average compression gain.
Number of flows decompressed	Total number of flows decompressed.
Number of server compressions prevented	Total number of server compressions prevented.
Number of times the compression gain is low	Total number of times the compression gain was low.
HTTP Ad-filter statistics:	
Number of advertisements blocked	Total number of advertisements blocked by the Advertisement Filter feature.
Number of advertisements accessed	Total number of advertisements accessed.
Ad-filter display statistics:	
Number of pages delivered with text-only display	Total number of Web pages with text-only display delivered to mobile client.
Number of pages delivered with onclick-with-text display	Total number of pages with onclick-with-text display delivered to mobile client.
Number of bytes added to web pages	Total number of bytes added to Web pages delivered due to the Advertisement Filter feature.
TPO error statistics:	
Allocation failures:	
HTTP url-rewrite	Total number of allocation failures HTTP URL Rewrite feature.
HTTP compression	Total number of allocation failures HTTP Compression feature.
HTTP ad-filter	Total number of allocation failures HTTP Advertisement Filter feature.

show active-charging udr-format all

Table 134.show active-charging udr-format all Command Output Descriptions

Field	Description
Service Name	Name of the Active Charging Service.
UDR Format Name	Name of the configured UDR format.
Attribute	Attribute informations configured in specific UDR format.
Total udr-format(s) found	The total number of the configured UDR formats.

show active-charging url-blacklisting statistics

Table 135. show active-charging url-blacklisting statistics Command Output Descriptions

Field	Description
Service name	Name of the ActiveCharging Service.
Cumulative URL-Blacklisting Statistics	
Total BlacklistedURL hits	The total number of Blacklisted URL hits.
Total BlacklistedURL misses	The total number of Blacklisted URL misses.

show active-charging url-blacklisting statistics rulebase name

Table 136. show active-charging url-blacklisting statistics rulebase name Command Output Descriptions

Field	Description
Service name	Name of the Active Charging Service.
Rulebase name	Name of the rulebase.
Blacklisted URL hits	The total number of Blacklisted URL hits.
Blacklisted URL misses	The total number of Blacklisted URL misses.
Total rulebases matched	The total number of rulebases matching the specified criteria.

show active-charging video detailed-statistics

Table 137. show active-charging video detailed-statistics Command Output Descriptions

Field	Description
RAT (Radio Access Type)	
GPRS Del. Rate	The average video delivery rate for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
GPRS Enc. Rate	The average video encoding rate for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
GPRS Tot. Bytes	The total payload bytes (excluding IP and TCP headers) transferred to the RAN side for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
GPRS %download	The average percentage (in terms of bytes) of video files downloaded for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
GPRS Tot. Video	The total number of video clips for GPRS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
UMTS Del. Rate	The average video delivery rate for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
UMTS Enc. Rate	The average video encoding rate for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
UMTS Tot. Bytes	The total payload bytes (excluding IP and TCP headers) transferred to the RAN side for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
UMTS %download	The average percentage (in terms of bytes) of video files downloaded for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
UMTS Tot. Video	The total number of video clips for UMTS Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
LTE Del. Rate	The average video delivery rate for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
LTE Enc. Rate	The average video encoding rate for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
LTE Tot. Bytes	The total payload bytes (excluding IP and TCP headers) transferred to the RAN side for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
LTE %download	The average percentage (in terms of bytes) of video files downloaded for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
LTE Tot. Video	The total number of video clips for LTE Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
HSPA Del. Rate	The average video delivery rate for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.

Field	Description
HSPA Enc. Rate	The average video encoding rate for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
HSPA Tot. Bytes	The total payload bytes (excluding IP and TCP headers) transferred to the RAN side for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
HSPA %download	The average percentage (in terms of bytes) of video files downloaded for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
HSPA Tot. Video	The total number of video clips for HSPA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
CDMA Del. Rate	The average video delivery rate for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
CDMA Enc. Rate	The average video encoding rate for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
CDMA Tot. Bytes	The total payload bytes (excluding IP and TCP headers) transferred to the RAN side for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
CDMA %download	The average percentage (in terms of bytes) of video files downloaded for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
CDMA Tot. Video	The total number of video clips for CDMA Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
WLAN Del. Rate	The average video delivery rate for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
WLAN Enc. Rate	The average video encoding rate for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
WLAN Tot. Bytes	The total payload bytes (excluding IP and TCP headers) transferred to the RAN side for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
WLAN %download	The average percentage (in terms of bytes) of video files downloaded for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
WLAN Tot. Video	The total number of video clips for WLAN Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
Other Del. Rate	The average video delivery rate for other Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
Other Enc. Rate	The average video encoding rate for other Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
Other Tot. Bytes	The total payload bytes (excluding IP and TCP headers) transferred to the RAN side for other Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
Other %download	The average percentage (in terms of bytes) of video files downloaded for other Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
Other Tot. Video	The total number of video clips for other Radio Access Type for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
Container (File Format)	

Field	Description
MP4 Enc. Rate	The average video encoding rate for MP4 container file format for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
MP4 Tot. Bytes	The total bytes transferred to RAN side for MP4 container file format for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
MP4 Tot. Video	The total number of video clips for MP4 container file format for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
FLV Enc. Rate	The average video encoding rate for FLV (Flash Video) container file format for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
FLV Tot. Bytes	The total bytes transferred to RAN side for FLV (Flash Video) container file format for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
FLV Tot. Video	The total number of video clips for FLV (Flash Video) container file format for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
Other Enc. Rate	The average video encoding rate for other container file format for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
Other Tot. Bytes	The total bytes transferred to RAN side for other container file format for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.
Other Tot. Video	The total number of video clips for other container file format for iPhone/iPad/iPod (iOS) devices, Android devices, laptops, and other devices.

show active-charging video detailed-statistics container mp4

Note that there are additional **container** options for this command, as follows: **container flv** and **container others**.

Table 138. show active-charging video detailed-statistics container mp4 Command Output Descriptions

Field	Description
Device Type iOS	
Total Content Size of the Videos	The total size of the video clips in bytes for iOS User Device Type for MP4 Container Type.
Total Duration of the Videos	The total duration of the video clips, in seconds, for iOS User Device Type for MP4 Container Type.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for iOS User Device Type for MP4 Container Type.
Total Video Object Count	The total number of video objects for iOS User Device Type for MP4 Container Type. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for iOS User Device Type for MP4 Container Type.
Device Type Android	
Total Content Size of the Videos	The total size of the video clips in bytes for Android User Device Type for MP4 Container Type.
Total Duration of the Videos	The total duration of the video clips, in seconds, for Android User Device Type for MP4 Container Type.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for Android User Device Type for MP4 Container Type.
Total Video Object Count	The total number of video objects for Android User Device Type for MP4 Container Type. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for Android User Device Type for MP4 Container Type.
Device Type Laptop	
Total Content Size of the Videos	The total size of the video clips in bytes for Laptop User Device Type for MP4 Container Type.
Total Duration of the Videos	The total duration of the video clips, in seconds, for Laptop User Device Type for MP4 Container Type.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for Laptop User Device Type for MP4 Container Type.
Total Video Object Count	The total number of video objects for Laptop User Device Type for MP4 Container Type. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.

Field	Description
Average Video Encoding Bit Rate	The average video encoding bit rate for Laptop User Device Type for MP4 Container Type.
Device Type Others	
Total Content Size of the Videos	The total size of the video clips in bytes for other User Device Type for MP4 Container Type.
Total Duration of the Videos	The total duration of the video clips, in seconds, for other User Device Type for MP4 Container Type.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for other User Device Type for MP4 Container Type.
Total Video Object Count	The total number of video objects for other User Device Type for MP4 Container Type. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for other User Device Type for MP4 Container Type.

show active-charging video detailed-statistics rat cdma

Note that there are additional **rat** options for this command, as follows: **rat gprs**, **rat hspa**, **rat lte**, **rat others**, **rat umts**, and **rat wlan**.

Table 139. show active-charging video detailed-statistics rat cdma Command Output Descriptions

Field	Description
User Device Type iOS	
Total Content Size of the Videos	The total size of the video clips in bytes for iOS User Device Type for CDMA Radio Access Type.
Total Duration of the Videos	The total duration of the video clips, in seconds, for iOS User Device Type for CDMA Radio Access Type.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for iOS User Device Type for CDMA Radio Access Type.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for iOS User Device Type for CDMA Radio Access Type.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download a video for iOS User Device Type for CDMA Radio Access Type.
Total Video Object Count	The total number of video objects for iOS User Device Type for CDMA Radio Access Type. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for iOS User Device Type for CDMA Radio Access Type.
Average Delivery Bit Rate	The average delivery bit rate for iOS User Device Type for CDMA Radio Access Type.
Percentage of Video Downloaded	The percentage of bytes downloaded for video for iOS User Device Type for CDMA Radio Access Type.
User Device Type Android	
Total Content Size of the Videos	The total size of the video clips in bytes for Android User Device Type for CDMA Radio Access Type.
Total Duration of the Videos	The total duration of the video clips, in seconds, for Android User Device Type for CDMA Radio Access Type.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for Android User Device Type for CDMA Radio Access Type.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for Android User Device Type for CDMA Radio Access Type.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download a video for Android User Device Type for CDMA Radio Access Type.

Field	Description
Total Video Object Count	The total number of video objects for Android User Device Type for CDMA Radio Access Type. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for Android User Device Type for CDMA Radio Access Type.
Average Delivery Bit Rate	The average delivery bit rate for Android User Device Type for CDMA Radio Access Type.
Percentage of Video Downloaded	The percentage of bytes downloaded for video for Android User Device Type for CDMA Radio Access Type.
User Device Type Laptop	
Total Content Size of the Videos	The total size of the video clips in bytes for Laptop User Device Type for CDMA Radio Access Type.
Total Duration of the Videos	The total duration of the video clips, in seconds, for Laptop User Device Type for CDMA Radio Access Type.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for Laptop User Device Type for CDMA Radio Access Type.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for Laptop User Device Type for CDMA Radio Access Type.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download a video for Laptop User Device Type for CDMA Radio Access Type.
Total Video Object Count	The total number of video objects for Laptop User Device Type for CDMA Radio Access Type. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for Laptop User Device Type for CDMA Radio Access Type.
Average Delivery Bit Rate	The average delivery bit rate for Laptop User Device Type for CDMA Radio Access Type.
Percentage of Video Downloaded	The percentage of bytes downloaded for video for Laptop User Device Type for CDMA Radio Access Type.
User Device Type Others	
Total Content Size of the Videos	The total size of the video clips in bytes for other User Device Type for CDMA Radio Access Type.
Total Duration of the Videos	The total duration of the video clips, in seconds, for other User Device Type for CDMA Radio Access Type.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for other User Device Type for CDMA Radio Access Type.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for other User Device Type for CDMA Radio Access Type.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download a video for other User Device Type for CDMA Radio Access Type.

Field	Description
Total Video Object Count	The total number of video objects for other User Device Type for CDMA Radio Access Type. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for other User Device Type for CDMA Radio Access Type.
Average Delivery Bit Rate	The average delivery bit rate for other User Device Type for CDMA Radio Access Type.
Percentage of Video Downloaded	The percentage of bytes downloaded for video for other User Device Type for CDMA Radio Access Type.

show active-charging video detailed-statistics ue laptop

Note that there are additional **ue** options for this command, as follows: **ue android**, **ue ios**, and **ue others**.

Table 140. show active-charging video detailed-statistics ue laptop Command Output Descriptions

Field	Description
Radio Type GPRS	
Total Content Size of the Videos	The total size in payload bytes (HTTP content length) of the video clips for GPRS Radio Access Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for GPRS Radio Access Type for laptops.
Total Bytes Sent to the User	The total payload bytes (excluding IP and TCP headers) of video data sent to the subscriber UE for GPRS Radio Access Type for laptops.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for GPRS Radio Access Type for laptops.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download all videos for GPRS Radio Access Type for laptops.
Total Video Object Count	The total number of video objects for GPRS Radio Access Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for GPRS Radio Access Type for laptops.
Average Delivery Bit Rate	The average delivery bit rate for GPRS Radio Access Type for laptops.
Percentage of Video Downloaded	The average percentage (in terms of bytes) of video files downloaded for GPRS Radio Access Type for laptops.
Radio Type UMTS	
Total Content Size of the Videos	The total size in payload bytes (HTTP content length) of the video clips for UMTS Radio Access Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for UMTS Radio Access Type for laptops.
Total Bytes Sent to the User	The total payload bytes (excluding IP and TCP headers) of video data sent to the subscriber UE for UMTS Radio Access Type for laptops.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for UMTS Radio Access Type for laptops.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download all videos for UMTS Radio Access Type for laptops.
Total Video Object Count	The total number of video objects for UMTS Radio Access Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for UMTS Radio Access Type for laptops.

Field	Description
Average Delivery Bit Rate	The average delivery bit rate for UMTS Radio Access Type for laptops.
Percentage of Video Downloaded	The average percentage (in terms of bytes) of video files downloaded for UMTS Radio Access Type for laptops.
Radio Type LTE	
Total Content Size of the Videos	The total size in payload bytes (HTTP content length) of the video clips for LTE Radio Access Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for LTE Radio Access Type for laptops.
Total Bytes Sent to the User	The total payload bytes (excluding IP and TCP headers) of video data sent to the subscriber UE for LTE Radio Access Type for laptops.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for LTE Radio Access Type for laptops.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download all videos for LTE Radio Access Type for laptops.
Total Video Object Count	The total number of video objects for LTE Radio Access Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for LTE Radio Access Type for laptops.
Average Delivery Bit Rate	The average delivery bit rate for LTE Radio Access Type for laptops.
Percentage of Video Downloaded	The average percentage (in terms of bytes) of video files downloaded for LTE Radio Access Type for laptops.
Radio Type HSPA	
Total Content Size of the Videos	The total size in payload bytes (HTTP content length) of the video clips for HSPA Radio Access Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for HSPA Radio Access Type for laptops.
Total Bytes Sent to the User	The total payload bytes (excluding IP and TCP headers) of video data sent to the subscriber UE for HSPA Radio Access Type for laptops.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for HSPA Radio Access Type for laptops.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download all videos for HSPA Radio Access Type for laptops.
Total Video Object Count	The total number of video objects for HSPA Radio Access Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for HSPA Radio Access Type for laptops.
Average Delivery Bit Rate	The average delivery bit rate for HSPA Radio Access Type for laptops.
Percentage of Video Downloaded	The average percentage (in terms of bytes) of video files downloaded for HSPA Radio Access Type for laptops.
Radio Type CDMA	

Field	Description
Total Content Size of the Videos	The total size in payload bytes (HTTP content length) of the video clips for CDMA Radio Access Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for CDMA Radio Access Type for laptops.
Total Bytes Sent to the User	The total payload bytes (excluding IP and TCP headers) of video data sent to the subscriber UE for CDMA Radio Access Type for laptops.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for CDMA Radio Access Type for laptops.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download all videos for CDMA Radio Access Type for laptops.
Total Video Object Count	The total number of video objects for CDMA Radio Access Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for CDMA Radio Access Type for laptops.
Average Delivery Bit Rate	The average delivery bit rate for CDMA Radio Access Type for laptops.
Percentage of Video Downloaded	The average percentage (in terms of bytes) of video files downloaded for video for CDMA Radio Access Type for laptops.
Radio Type WLAN	
Total Content Size of the Videos	The total size in payload bytes (HTTP content length) of the video clips for WLAN Radio Access Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for WLAN Radio Access Type for laptops.
Total Bytes Sent to the User	The total payload bytes (excluding IP and TCP headers) of video data sent to the subscriber UE for WLAN Radio Access Type for laptops.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for WLAN Radio Access Type for laptops.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download all videos for WLAN Radio Access Type for laptops.
Total Video Object Count	The total number of video objects for WLAN Radio Access Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for WLAN Radio Access Type for laptops.
Average Delivery Bit Rate	The average delivery bit rate for WLAN Radio Access Type for laptops.
Percentage of Video Downloaded	The average percentage (in terms of bytes) of video files downloaded for video for WLAN Radio Access Type for laptops.
Radio Type Others	
Total Content Size of the Videos	The total size in payload bytes (HTTP content length) of the video clips for other Radio Access Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for other Radio Access Type for laptops.

Field	Description
Total Bytes Sent to the User	The total payload bytes (excluding IP and TCP headers) of video data sent to the subscriber UE for other Radio Access Type for laptops.
Total Duration of Video Sessions	The total duration, in seconds, of the video sessions for other Radio Access Type for laptops.
Total Number of TCP Flows for Video Sessions	The total number of TCP flows used to download all videos for other Radio Access Type for laptops.
Total Video Object Count	The total number of video objects for other Radio Access Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for other Radio Access Type for laptops.
Average Delivery Bit Rate	The average delivery bit rate for other Radio Access Type for laptops.
Percentage of Video Downloaded	The average percentage (in terms of bytes) of video files downloaded for other Radio Access Type for laptops.
Container Type MP4	
Total Content Size of the Videos	The total size of the video clips in bytes for MP4 Container Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for MP4 Container Type for laptops.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for MP4 Container Type for laptops.
Total Video Object Count	The total number of video objects for MP4 Container Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for MP4 Container Type for laptops.
Container Type FLV	
Total Content Size of the Videos	The total size of the video clips in bytes for FLV Container Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for FLV Container Type for laptops.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for FLV Container Type for laptops.
Total Video Object Count	The total number of video objects for FLV Container Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.
Average Video Encoding Bit Rate	The average video encoding bit rate for FLV Container Type for laptops.
Container Type Others	
Total Content Size of the Videos	The total size of the video clips in bytes for other Container Type for laptops.
Total Duration of the Videos	The total duration of the video clips, in seconds, for other Container Type for laptops.
Total Bytes Sent to the User	The total bytes of video data sent to the subscriber UE for other Container Type for laptops.
Total Video Object Count	The total number of video objects for other Container Type for laptops. A video object exists from the creation of the first flow to the deletion of the last flow comprising each video.

Field	Description
Average Video Encoding Bit Rate	The average video encoding bit rate for other Container Type for laptops.

Chapter 69

show administrators

This chapter includes the `show administrators` command output tables.

show administrators

Table 141. show administrators Command Output Descriptions

Field	Description
Administrator/Operator Name	Displays the name of the administrative user currently accessing the system.
Type	Displays the administrative user's type. admin represents an administrator. oper represents an operator.
TTY	Displays a reference for the virtual console device for the CLI instance.
Start Time	Displays the time and date that the administrative user's session started.

show administrators session id

Table 142. show administrators session id Command Output Descriptions

Field	Description
Administrator/Operator Name	Displays the name of the administrative user currently accessing the system.
Login Context	Displays the context in which the CLI user is working.
Remote Addr	Displays the IP address from which the CLI user is accessing the system.
Session ID	Displays the assigned session ID.

Chapter 70

show alarm

This chapter includes the **show alarm** command output tables.

show alarm outstanding all verbose

Table 143. show alarm outstanding all verbose Command Output Descriptions

Field	Description
Severity (Sev)	If an alarm is present, the system will indicate that one of the following alarm levels has been triggered: • Minor (MN): This alarm is triggered when a high temperature is detected on a card causing the fan tray to switch to high speed. • Major (MJ): This alarm is triggered on the following conditions: • A hardware failure was detected on a card that will cause it to be taken off-line • One of the Power Filter Units has failed or was removed. • One or more of the fans on either the upper or lower fan tray have failed. • Either the upper or lower fan trays have been removed. • Critical (CR): This alarm is triggered when events cause a degradation in service (i.e. the system is supporting a large number of subscribers and Processing Cards are removed thus reducing the amount of available CPU and memory resources).
Object	Describes the object that triggered the alarm event
Event	Describes the event that triggered the alarm condition.
Timestamp	Lists the date and time that the alarm condition was triggered.
Alarm ID	The internal system ID of the alarm.

show alarm statistics

Table 144. show alarm statistics Command Output Descriptions

Field	Description
Current Outstanding Alarms	The alarm conditions that are currently active.
Cumulative Totals	The number of alarms that have occurred since the system was last booted.

Chapter 71

show alcap

This chapter includes the **show alcap** command output tables.

show alcap counters

Table 145. show alcap counters Command Output Descriptions

Field	Description
AAL2 Channels Counters	This group displays the counter statistics of AAL2 channels in ALCAP service.
Number of AAL2 channels in IDLE state	Indicates the total number of AAL2 channels in IDLE state in ALCAP service instance.
Number of AAL2 channels in CONNECTED state	Indicates the total number of AAL2 channels in CONNECTED state in ALCAP service instance.
Number of AAL2 channels in CONNECTING state	Indicates the total number of AAL2 channels in CONNECTING state.
Number of AAL2 channels in RELEASE PENDING state	Indicates the total number of AAL2 channels in RELEASE PENDING state.
Number of AAL2 channels in RESET PENDING state	Indicates the total number of AAL2 channels in RESET PENDING state.
AAL2 Paths Counters	This group displays the counter statistics of AAL2 paths in particular AAL2 channel in ALCAP service.
Number of AAL2 Paths in LOCALLY BLOCKED state	Indicates the total number of AAL2 paths in the AAL2 node that are currently blocked locally.
Number of AAL2 Paths in REMOTE BLOCKED state	Indicates the total number of AAL2 paths in the AAL2 node that are currently blocked by remote peer node.
Number of AAL2 Paths in BLOCKED state	Indicates the total number of AAL2 paths in the AAL2 node that are currently blocked. This includes both, local and remote blocks.
Number of AAL2 Paths in RESET PENDING state	Indicates the total number of AAL2 Paths in RESET PENDING state.

show alcap-service all

Table 146. show alcap-service all Command Output Descriptions

Field	Description
Aal2 node	The name of the ALCAP servicenode in which the ALCAP service is configured.
Aal2 node id	The identity number of the ALCAP node in which ALCAP service is configured.
Point code	Point code of adjacent AAL2 node in SS7 format address.
AESA	Specifies the ATM Endpoint Service Address (AESA) in an ATM (or AAL2) network to map with adjacent AAL2 node. The AESA is based on the generic network service access point (NSAP) format. The ATM connection from HNB-GW terminates at this point.
Total Aal2 Path	Indicates the total number of AAL2 paths configured for this ALCAP service on an AAL2 node.
Total Aal2 Path Blocked	Indicates the total number of AAL2 paths in the AAL2 node that are currently blocked. This includes both, local and remote blocks.
Total Aal2 Path Locally Blocked	Indicates the total number of AAL2 paths in the AAL2 node that are currently blocked locally.
Total Aal2 Path Remote Blocked	Indicates the total number of AAL2 paths in the AAL2 node that are currently blocked by remote peer node.
Aal2 Path info	This group displays the AAL2 path related information.
Aal2 Path id	Indicates the identity number of AAL2 path configured on this AAL2 node under ALCAP service.
ATM Port Bound	Indicates the status if the Aal2 path is bound to a physical ATM port or not.
LPort Id	Indicates the logical port Id identifying an Aal2 path binding to an ATM port.
Path FSM State	Indicates the current state of this AAL2 path FSM. Possible states are: • Idle: The Path FSM is in Idle state • Pending Reset Confirm: A path reset procedure is in process and waiting for a conformation from the peer node. • Pending Block Confirm: A path block procedure is in process and waiting for a conformation from the peer node. • Pending Un-Block Confirm: A path Un-block procedure is in process and waiting for a conformation from the peer node. • Pending Reset and Block Confirm: Path reset and path block procedure is in process and waiting for a conformation from the peer node. • Pending Reset and Un-Block Confirm: Path reset and path un-block procedure is in process and waiting for a conformation from the peer node.
Locally Blocked	Indicates whether an AAL2 path on AAL2 node under ALCAP service is locally blocked or not.

Field	Description
Remote Blocked	Indicates whether an AAL2 path on AAL2 node under ALCAP service is remotely bolcked by peer node or not.

show alcap-service full

Table 147. show alcap-service full Command Output Descriptions

Field	Description
alcap service	The name of the ALCAP service of which statistics are displayed.
service id	The identity number of the ALCAP service of which statistics are displayed.
Context	Indicates the system context name in which ALCAP service is configured.
state	Indicates the state of the ALCAP service.
self point code	Indicates the address of this ALCAP service in SS7 point code notation.
ss7 routing domain id	Indicates the routing domain id in which ALCAP service is associated.
AAL2 Nodes	This group displays the information related to AAL2 node configured in ALCAP service.
Node name	Indicates the name of the AAL2 node configured in ALCAP service.
Point Code	Indicates the address of AAL2 node in SS7 point code notation.
Path id	Indicates the identity number of AAL2 path configured on this AAL2 node under ALCAP service.
Routes	This group displays the information related to AAL2 routes configured for AAL2 path.
AESA	Specifies the ATM Endpoint Service Address (AESA) in an ATM (or AAL2) network to map with adjacent AAL2 node. The AESA is based on the generic network service access point (NSAP) format. The ATM connection from HNB-GW terminates at this point.
Node id	Indicates the AAL2 node identity number used for routes in AAL2 path FSM.
ERQ timer	Indicates the maximum time, in seconds, configured for Timer_ERQ on the system to wait for response from adjacent AAL2 node before reporting the failure of AAL2 Establish Request procedure. Configurable range is from 5 through 30 seconds and default is 5 seconds.
REL timer	Indicates the maximum time, in seconds, configured for Timer_REL on the system to wait for response from adjacent AAL2 node before reporting the failure of AAL2 Release Request procedure. Configurable range is from 2 through 60 seconds and default is 2 seconds.
RES timer	Indicates the maximum time, in seconds, configured for Timer_RES on the system to wait for response from adjacent AAL2 node before reporting the failure of AAL2 Reset Request procedure. Configurable range is from 2 through 60 seconds and default is 2 seconds.
BLO timer	Indicates the maximum time, in seconds, configured for Timer_BLO on the system to wait for response from adjacent AAL2 node before reporting the failure of AAL2 Path Block procedure. Configurable range is from 2 through 60 seconds and default is 2 seconds.
UBL timer	Indicates the maximum time, in seconds, configured for Timer_UBL on the system to wait for response from adjacent AAL2 node before reporting the failure of AAL2 Path Un-Block procedure. Configurable range is from 2 through 60 seconds and default is 2 seconds.

Field	Description
MOD timer	Indicates the maximum time, in seconds, configured for Timer_MOD on the system to wait for response from adjacent AAL2 node before reporting the failure of AAL2 Path Modify Request procedure. Configurable range is from 5 through 30 seconds and default is 5 seconds.
STC long timer	Indicates the configured duration value in milliseconds for STC long timer. This timer is used by the congestion indication procedure. Receipt of a repeated congestion indication from MTP3B before the expiry of this timer is interpreted as the congestion situation. On the other hand, if no congestion indication is received from MTP3B before expiry of this timer, the congestion situation is considered to have improved. Configurable range is from 5000 ms through 10000 ms and default value is 5000 ms.
STC short timer	Indicates the configured duration value in milliseconds for STC long timer. This timer is used by the congestion indication procedure. The role of this timer is to avoid overreacting if multiple congestion indications are received from MTP3B in quick succession. Configurable range is from 300 ms through 600 ms and default value is 300 ms.
Max-reset-retransmission	Indicates maximum number of retries allowed for transmission of RESET message to reset the AAL2 path by ALCAP service. Configurable range is 0 to 4 and default is 1. A "0" value indicates that retransmission of RESET message is disabled.

Chapter 72

show apn

This chapter includes the **show apn** command output tables.

show apn all

Table 148. show apn all Command Output Descriptions

Field	Description
access point name (APN)	Indicates the name of the access point name (APN) for which counters are displayed.
authentication context	Name of the system context used for authentication for this APN.
pdp type	Indicates the type of PDP context. Possible types are: - IPv4 - IPv6 - PPP
ehrpd access	Specifies whether ehrpd-access option is configured in this APN or not. If enabled, the P-GW excludes IPv6 traffic from being delivered to UEs on the eHRPD network that do not have IPv6 capabilities.
Selection Mode	Indicates the APN selection mode applicable for this APN. Possible selection modes are: - Chosen by SGSN - Sent by MS - Subscribed
ip source violation	Indicates whether check for IPv4 source validation violations enabled or not. Possible status are: - Checked - Ignored
drop limit	Indicates the IP source-violation drop limit configured for the subscriber. The drop-limit is the number of invalid packets that can be received from a subscriber prior to their session being deleted. Refer to the ip source-violation command in the APN configuration mode.
ip source violation no accounting	The IP source validation violations that were detected but not included in the statistics.
accounting mode	Indicates the accounting mode configured for this APN. Possible modes are: - gtp - GTP CDR accounting - none - No accounting - radius-diameter - RADIUS or Diameter accounting
No early PDUs	Specifies whether “ no-early-pdu ” option configured in this APN or not. If “no-early-PDUs” is enabled, the chassis shall not send uplink/downlink data from/to a MS till it receives the Acct-Rsp Start for the same from the AAA device. On receiving the Acct-Rsp, pending PDUs are sent out.
no-interims	Specifies whether “ no-interims ” option configured in this APN or not. If “no-interims” is enabled, the chassis shall not send any interim message to the AAA device.

Field	Description
Bearer Control Mode	Specifies whether Bearer Control Mode is enabled in this APN or not.
max-primary-pdp-contexts	Specifies the maximum primary PDP contexts allowed in this APN.
total-pdp-contexts	Specifies the total primary and secondary PDP contexts allowed in this APN.
primary contexts	Specifies the total primary contexts allowed in this APN.
total contexts	Specifies the total primary and secondary contexts allowed in this APN.
max secondary contexts per-subscriber	Specifies the maximum secondary contexts allowed in this APN for a subscriber.
IMS Authorization	Specifies whether IMS authorization support is enabled in this APN or not.
Credit Control	Specifies whether Diameter pre-paid credit control support is enabled in this APN or not.
Credit Control Service Name	Specifies the name of credit control service configured on the chassis.
Accounting Policy Name	Specifies the name of accounting policy associated with the configured APN. If no accounting policy is associated, this field will display as N/A.
mbms bearer absolute timeout	Indicates the absolute timeout duration in seconds for Multimedia Broadcast-Multicast Service (MBMS) bearer context.
mbms bearer idle timeout	Indicates the idle timeout duration in seconds for Multimedia Broadcast-Multicast Service (MBMS) bearer context.
mbms ue absolute timeout	Indicates the absolute timeout duration in seconds for Multimedia Broadcast-Multicast Service (MBMS) UE context.
local ip	Specifies the local IP address of the interface assigned to this APN.
nexthop gateway addr	Specifies the IP address of the next hop gateway configured in this APN.
primary dns	Indicates the IP address of primary Domain Name Server (DNS).
secondary dns	Indicates the IP address of secondary Domain Name Server (DNS).
primary nbns	Indicates the IP address of primary NetBIOS Name Server (NBNS).
secondary nbns	Indicates the IP address of secondary NetBIOS Name Server (NBNS).
ppp keep alive period	Indicates the duration in seconds to transmit LCP keep-alive packet.
ppp mtu	Indicates the maximum size of transmission units in bytes configured for this APN.
absolute timeout	Indicates the absolute timeout duration in seconds for session configured in this APN.
idle timeout	Indicates the idle timeout duration in seconds for session configured in this APN.
idle-timeout-activity ignore-downlink	Indicates whether idle timeout activity configured in this APN to consider downlink traffic as activity for idle-timeout or not.
long duration timeout	Indicates the timeout duration in seconds for long duration timeout support configured in this APN.
long dur inactivity time	Indicates the inactivity duration in seconds for long duration timeout support configured in this APN.

Field	Description
long duration action	Indicates the action configured in this APN for long duration timeout support. Possible actions are: • Detection • Disconnection
ip header compression	Indicates the IP header compression method configured in this APN for ROust Header Compression (ROHC) support. Supported method is Van Jacobsen (VJ).
ip hide service address	Indicates whether APN is configured to hide service IP address from the subscriber (for security reasons) or not.
ip output access-group	The IPv4 access control list (ACL) configured in this APN for outward traffic.
ip input access-group	The IPv4 access control list (ACL) configured in this APN for inward traffic.
ipv6 output access-group	The IPv6 access control list (ACL) configured in this APN for outward traffic.
ipv6 input access-group	The IPv6 access control list (ACL) configured in this APN for inward traffic.
policy-group in	The traffic policy group configured in this APN for inward traffic.
policy-group out	The traffic policy group configured in this APN for outward traffic.
permit ip multicast	Indicates whether APN is configured to discard or permit the IP multicast.
ppp authentication	Indicates the type of PPP authentication configured for this APN.
eap authentication initial-access-request	Indicates the type of initial access request to be used in Diameter EAP request.
allow noauthentication	Indicates whether PPP session is allowed without authentication in this APN or not.
imsi authentication	Indicates whether PPP session authentication in this APN is configured for IMSI authentication or not.
msisdn authentication	Indicates whether PPP session authentication in this APN is configured for MSISDN authentication or not.
ip destination context	Indicates the name of the configured destination context for this APN.
Rule Base	Indicates the name of the configured rulebase for this APN.
Content-Filtering Policy-Id	Indicates whether inline content filtering policy is configured for this APN or not.
mediation accounting	Indicates whether mediation device is configured for accounting in this APN or not.
mediation-device context	Indicates the name of the system context to use for mediation device for accounting in this APN.
mediation no early PDUs	Specifies whether “ no-early-pdu ” option configured for this subscriber or not. If “no-early-PDUs” is enabled, the chassis shall not send uplink/downlink data from/to a MS till it receives the Acct-Rsp Start for the same from the mediation device. On receiving the Acct-Rsp, pending PDUs are sent out.
mediation no-interims	Specifies whether “ no-interims ” option configured for this subscriber or not. If “no-interims” is enabled, the chassis shall not send any interim message to the mediation device.

Field	Description
mediation delay-GTP-response	Specifies whether “ delay-GTP-response ” option configured for this subscriber or not. When enabled, this option delays the Create PDP Context response until an Accounting Start response is received from the mediation device.
outbound username	Name of the user for outbound traffic.
ip address pools	Indicates the IP address pool used for this APN.
access-link ip-frag	Indicates the IP packet fragmentation setting for access link.
ignore DF-bit data-tunnel	Indicates whether “ignore df-bit” is set for data tunnel or not.
ip allocation type	Specifies the type of IP allocation method used for IP address allocation. Possible types are: • DHCP-Proxy • DHCP-Relay • Local • Dynamic • Static
allow user specified ip addr	Indicates whether user specified IP address is allowed or not for IP allocation.
prefer dhcp options	Indicates whether support for DHCP supplied parameters, like DNS/NBNS addresses, in subscriber session is configured for this APN. This support can be enabled with ip address alloc-method dhcp-proxy prefer-dhcp-options command in APN Configuration mode.
3 gpp qos to dscp mapping	This group indicates the 3GPP QoS to DSCP mapping information.
qci 1: ef	Indicates the DSCP configured for QCI1 type of traffic.
qci 2: ef	Indicates the DSCP configured for QCI2 type of traffic.
qci 3: af11	Indicates the DSCP configured for QCI3 type of traffic.
qci 4: af11	Indicates the DSCP configured for QCI4 type of traffic.
qci 5: ef	Indicates the DSCP configured for QCI5 type of traffic.
qci 6: ef	Indicates the DSCP configured for QCI6 type of traffic.
qci 7: af21	Indicates the DSCP configured for QCI7 type of traffic.
qci 8: af21	Indicates the DSCP configured for QCI8 type of traffic.
qci 9: be	Indicates the DSCP configured for QCI9 type of traffic.
3GPP QoS to DSCP Mapping based on Alloc. Prio	This group indicates the 3GPP QoS to DSCP mapping information based on allocation priority.
qci 5 (Alloc.P 1): ef	Indicates the DSCP configured for QCI5 type of traffic with allocation priority 1.
qci 5 (Alloc.P 2): ef	Indicates the DSCP configured for QCI5 type of traffic with allocation priority 2.
qci 5 (Alloc.P 3): ef	Indicates the DSCP configured for QCI5 type of traffic with allocation priority 3.
qci 6 (Alloc.P 1): ef	Indicates the DSCP configured for QCI6 type of traffic with allocation priority 1.
qci 6 (Alloc.P 2): ef	Indicates the DSCP configured for QCI6 type of traffic with allocation priority 2.

Field	Description
qci 6 (Alloc.P 3): ef	Indicates the DSCP configured for QCI6 type of traffic with allocation priority 3.
qci 7 (Alloc.P 1): af21	Indicates the DSCP configured for QCI7 type of traffic with allocation priority 1.
qci 7 (Alloc.P 2): af21	Indicates the DSCP configured for QCI7 type of traffic with allocation priority 2.
qci 7 (Alloc.P 3): af21	Indicates the DSCP configured for QCI7 type of traffic with allocation priority 3.
qci 8 (Alloc.P 1): af21	Indicates the DSCP configured for QCI8 type of traffic with allocation priority 1.
qci 8 (Alloc.P 2): af21	Indicates the DSCP configured for QCI8 type of traffic with allocation priority 2.
qci 8 (Alloc.P 3): af21	Indicates the DSCP configured for QCI8 type of traffic with allocation priority 3.
Copy user-datagram IP TOS	Indicates whether copying of IP TOS octet value from user IPv4 datagrams to IP header of tunnel encapsulation is enabled or not.
APN defined Charging Characteristics	This group displays the APN defined charging characteristics for various types of subscribers.
Home Subscribers	This sub-group displays the APN defined charging characteristics for home subscribers.
Behavior Bits	Indicates the behavior bits configured for home subscribers in APN defined charging characteristics.
Profile Value	Indicates the profile value configured for home subscribers in APN defined charging characteristics.
Visiting Subscribers	This sub-group displays the APN defined charging characteristics for visiting subscribers.
Behavior Bits	Indicates the behavior bits configured for visiting subscribers in APN defined charging characteristics.
Profile Value	Indicates the profile value configured for visiting subscribers in APN defined charging characteristics.
Roaming Subscribers	This sub-group displays the APN defined charging characteristics for roaming subscribers.
Behavior Bits	Indicates the behavior bits configured for roaming subscribers in APN defined charging characteristics.
Profile Value	Indicates the profile value configured for roaming subscribers in APN defined charging characteristics.
All (Home/Visiting/Roaming) Subscribers	This sub-group displays the APN defined charging characteristics for all subscribers (including home, visiting, and roaming).
Behavior Bits	Indicates the behavior bits configured for all subscribers (including home, visiting, and roaming) in APN defined charging characteristics.
Profile Value	Indicates the profile value configured for all subscribers (including home, visiting, and roaming) in APN defined charging characteristics.
Subscribers to use APN defined charging characteristics	Indicates the number of subscriber to use APN defined charging characteristics.
Subscribers to use RADIUS returned charging characteristics	Indicates whether subscribers in this APN are configured to use charging characteristics returned from RADIUS server.
dhcp service name	Specifies the name of the DHCP service configured for IP address allocation.

Field	Description
dhcp context name	Specifies the name of the DHCP context where DHCP service is configured for IP address allocation.
dhcp lease expiry policy	Specifies the DHCP address lease expiry policy. Possible actions are: • autoconnect • disconnect
mobile-ip	Specifies the whether Mobile IP is configured in this APN or not.
mobile-ip home-agent	Specifies the IP address of home agent (HA) to use for Mobile IP session in this APN.
mobile-ip alternate-home-agent(s)	Specifies the IP address of alternate home agent (HA) to use for Mobile IP session in this APN.
mobile-ip reverse-tunnel	Specifies the whether Mobile IP reverse tunnel is enabled for Mobile IP session in this APN or not.
mobile-ip mn-aaa-removal-indication	Specifies the whether “mn-aaa-removal-indication” parameter is configured for Mobile IP session in this APN or not.
mobile-ip mn-ha-spi	Specifies the security parameter index (SPI) configured between MN and HA for Mobile IP session in this APN.
mobile-ip mn-ha-hash-algorithm	Specifies the hash algorithm configured for Mobile IP session in this APN. Possible hash algorithms are: • hmac-md5 • md5 • rfc2002-md5
proxy-mip	Specifies the whether Proxy-Mobile IP is configured in this APN or not.
proxy-mip null-username static home address	Specifies the whether handling of RRQ to enable the acceptance without NAI extension in this APN is enabled or not.
Tunnel peer load-balancing	Specifies the tunnel peer selection method in this APN for load balancing between tunnel-peers. Possible selection methods are: • balanced • prioritized • random
L3-to-L2 tunnel address-policy no-alloc-validate	Specifies whether this APN is configured, to not to allocate or validate subscriber addresses locally for such sessions, it passes the address between remote tunnel terminator to the MobileNode, or not.
tunnel address-policy alloc-validate	Specifies whether this APN is configured, to allocate addresses for cases in which IP addresses are dynamically assigned, or not.

Field	Description
NPU QoS Traffic Priority	Indicates the configured NPU QoS priority queue for packets facilitated by the APN. Possible priorities are: • best-effort • bronze • derive-from-packet-dscp • gold • silver.
APN QoS Attributes	Specifies the QoS attribute configured in this APN.
Newcall Policy	Indicates the policy for action on new calls coming on this APN. Possible actions are: • Accept • Reject
SDU Error Ratio	Indicates the QoS attribute reliability class based on Service Data Unit (SDU) Error Ratio attributes configured in this APN.
Residual BER	Indicates the QoS attribute reliability class based on Residual Bit Error Ratio (BER) attributes configured in this APN.
QCI n	Specifies the statistics for use traffic of QoS QCI class along with traffic status. Here n (qci-val) is the QCI for which the negotiate limit is being set, it ranges from 1 to 9.
Downlink Negotiate Limit	Specifies whether traffic data QoS negotiation limit in downlink direction is enabled or not for this class of QoS in this APN. By default it's disabled.
Uplink Negotiate Limit	Specifies whether traffic data QoS negotiation limit in uplink direction is enabled or not for this class of QoS in this APN. By default it's disabled.
Peak Data Rate (in bps)	The peak data rate in bit per seconds for this class of QoS in this APN.
Committed Data Rate(in bps)	The committed data rate in bit per seconds for this class of QoS in this APN.
Downlink Rate Limit	Specifies whether traffic data rate limit in downlink direction is enabled or not for this class of QoS in this APN.
Uplink Rate Limit	Specifies whether traffic data rate limit in uplink direction is enabled or not for this class of QoS in this APN.
Burst Size	This group indicates the static/dynamic burst size in bytes for peak and guaranteed rate limiting for this class of QoS in this APN.
Auto Readjust	Indicates whether auto readjustment of burst size is enabled or not. Possible states are: • Enabled • Disabled
Auto Readjust Duration	Indicates the configured auto readjust duration in a seconds. If auto readjust is enabled and no readjust duration is specified the default value is 1 second.
Peak Burst Size(bytes)	Indicates the peak burst size in bytes calculated dynamically by auto readjust duration and rate limit value.

Field	Description
Guaranteed Burst Size(bytes)	Indicates the guaranteed burst size in bytes calculated dynamically by auto readjust duration (seconds) and rate limit value (bytes). This counter is applicable only when auto readjustment is enabled.
Exceed Action	Specifies the action on downlink/uplink data rate when exceeds the allowed rate limit for this class of QoS. Possible actions are: • drop: drop the packets. • lower-ip-precedence: transmit the packet after lowering the ip-precedence. • transmit: transmit the packet.
Violate Action	Specifies the action on downlink/uplink data rate violation of allowed rate limit for this class of QoS. Possible actions are: • drop: drop the packets. • lower-ip-precedence: transmit the packet after lowering the ip-precedence. • shape: enables the traffic shaping and provides the buffering of user packets when subscriber traffic violates the allowed peak/committed data rate. • shape-transmit-when-buffer-full: enables the traffic shaping and allows the packet to be transmitted when buffer memory is full. • transmit: transmit the packet.
APN-AMBR	Specifies the traffic statistics for APN Maximum Bit Rate.
Downlink Apn Ambr	Specifies whether traffic data QoS negotiation limit in downlink direction is enabled or not for this class of QoS in this APN. By default it's disabled. Possible states are: • Enabled • Disabled
Uplink Apn Ambr	Specifies whether traffic data QoS negotiation limit in uplink direction is enabled or not for this class of QoS in this APN. By default it's disabled. Possible states are: • Enabled • Disabled
Burst Size	This group indicates the static/dynamic burst size in bytes for peak and guaranteed rate limiting for this class of QoS in this APN.
Auto Readjust	Indicates whether auto readjustment of burst size is enabled or not. Possible states are: • Enabled • Disabled
Auto Readjust Duration	Indicates the configured auto readjust duration in a seconds. If auto readjust is enabled and no readjust duration is specified the default value is 1 second.

Field	Description
Violate Action	Specifies the action on downlink/uplink data rate violation of allowed rate limit for this class of QoS. Possible actions are: • drop: drop the packets. • lower-ip-precedence: transmit the packet after lowering the ip-precedence. • shape: enables the traffic shaping and provides the buffering of user packets when subscriber traffic violates the allowed peak/committed data rate. • shape-transmit-when-buffer-full: enables the traffic shaping and allows the packet to be transmitted when buffer memory is full. • transmit: transmit the packet.
ppp accept peer ipv6 ifid	Indicates the IPv6 interface id of peer to accept PPP session.
ipv6 initrouter advt interval	Indicates the initial IPv6 router advertisement interval in seconds for this APN.
ipv6 initrouter number of advts	Indicates the total number of initial IPv6 router advertisement for this APN.
ipv6 address prefix	Indicates the IPv6 address prefix configured for sessions facilitated by this APN.
ipv6 address prefix pool	Indicates the IPv6 address prefix pool name configured for sessions facilitated by this APN.
ipv6 interface id	Indicates the IPv6 interface id configured for sessions facilitated by this APN.
ipv6 dns primary server	Indicates the IPv6 address of primary DNS server configured for sessions facilitated by this APN.
ipv6 dns secondary server	Indicates the IPv6 address of secondary DNS server configured for sessions facilitated by this APN.
ipv6 egress address filtering	Indicates whether egress address filtering configured in this APN or not to filter out packets not meant for the mobile interface ID.
ipv6 dns proxy	Indicates whether IPv6 DNS proxy server configured for sessions facilitated by this APN or not.
ipv6 minimum link MTU	Indicates the size of packet in bytes configured for access-link MTU for fragment.
Radius Group	Indicates the AAA server group associated with this APN.
Radius Secondary Group	If the secondary Accounting group is configured in the APN configuration, this field displays the corresponding group name. Otherwise, it displays <i>none</i> .
Radius Returned Framed IP Address	This group specifies the action and policy to handle the framed IP address returned from RADIUS server.
Policy	Specifies the policy to handle the framed IP address returned from RADIUS server. Possible actions are: • accept-call-when-ms-ip-not-supplied • reject-call-when-ms-ip-not-supplied
Access-flow traffic-validation	Specifies whether traffic validation for access flow is enabled for this APN or not.
Virtual APN Configuration	Indicates whether virtual APN is configured with APN or not.
Preference	Specifies the configured preference value of the rule for the virtual apn. It is an integer value which ranges from 1 to 1000.

Field	Description
Rule-Definition	Specifies the configured rule definition(s) for the virtual apn. Rule definitions include: • access-gw-address • bearer-access-service • cc-profile: charging characteristics profile index ranging from 0 to 15 • domain • mcc: mobile country code ranging from 100 to 999 • msisdn-range • rat-type: eutran, gan, geran, hspa, utran, and wlan • roaming-mode: home, roaming, and visiting
Selected-APN	Specifies the access point name (APN) in the VPN context to allow configuration of virtual APN related parameters.
IPv6 Configuration	This group displays the configuration related to IPv6 parameters.
IPv6 initial number of router advertisements	Indicates the total number of initial IPv6 router advertisement for this APN.
IPv6 initial router advertisements interval	Indicates the initial IPv6 router advertisement interval in seconds for this APN.
IPv6 Prefix Pool	Indicates the IPv6 address prefix pool name configured for sessions facilitated by this APN.
IPv6 Egress address filtering	Indicates whether egress address filtering configured in this APN or not to filter out packets not meant for the mobile interface ID.
IPv6 Primary DNS server address	Indicates the IPv6 address of primary DNS server configured for sessions facilitated by this APN.
IPv6 Secondary DNS server address	Indicates the IPv6 address of secondary DNS server configured for sessions facilitated by this APN.
GTPP Group	Displays all the configured GTPP server groups associated with this APN.
GTPP Accounting Context	Specifies the name of all configured GTPP accounting contexts associated with this APN.
Firewall Policy	Indicates whether stateful firewall policy is applicable with this APN or not.
Mobile IPv6 Tunnel MTU	Indicates the configured maximum transmission unit of packet in bytes for Mobile IPv6 tunnel traffic.
Mobile IPv6 Tunnel MTU Exceed Action	Indicates the action to take on packets which exceeds the maximum transmission unit of packet in bytes for Mobile IPv6 tunnel traffic. Possible actions are: • Normal processing • Ignore defragment bit • Fragment and forward the packet and notify the sender
Mobile IPv6 Home Agent	Specifies the IPv6 address of home agent (HA) to use for Mobile IP session in this APN.
Mobile IPv6 Home Link Prefix	Specifies the home link prefix for to use for Mobile IP session in this APN.
Mobile IPv6 Home Address	Specifies the home IPv6 address of subscriber to use for Mobile IP session in this APN.

show apn counter ip-allocation all

Table 149. show apn counter ip-allocation all Command Output Descriptions

Field	Description
APN	Indicates the name of the access point name (APN) for which counters are displayed.
UE PROVID.	Indicates the total number of active sessions using UE provided IP allocation method through this APN.
LOCAL POOL	Indicates the total number of active sessions using Local Pool method for IP allocation through this APN.
AAA	Indicates the total number of active sessions using AAA provided IP allocation method through this APN.
DHCP	This group indicates the total number of active sessions using DHCP method for IP allocation through this APN. Possible groups are: CLIENT: Indicates the number of active sessions using DHCP client method for IP allocation through this APN. RELAY: Indicates the number of active sessions using DHCP relay method for IP allocation through this APN.
PASSTHRU	Indicates the total number of active sessions using PASSTHRU IP allocation method through this APN.

show apn statistics name

Table 150. show apn statistics name Command Output Descriptions

Field	Description
Data Statistics ('uplink'=to PDN, 'downlink'=from PDN):	
uplink bytes	The current total number of bytes sent on the Gi interface for the APN.
downlink bytes	The current total number of bytes received on the Gi interface for the APN.
uplink pkts	The current total number of IP packets sent from the Gi interface for the APN.
downlink pkts	The current total number of IP packets received from the Gi interface for the APN.
uplink pkts dropped	The current total number of IP packets for the APN that were dropped prior to sending over the Gi interface.
downlink pkts dropped	The current total number of IP packets received from the Gi interface for the APN and dropped.
uplink bytes dropped	The current total number of IP bytes for the APN that were dropped prior to sending over the Gi interface.
downlink bytes dropped	The current total number of IP bytes received from the Gi interface for the APN and dropped.
uplink Flow MBR excd byte drop	Number of exceeded uplink bytes dropped due to maximum bit rate.
downlink Flow MBR excd byte drop	Number of exceeded downlink bytes dropped due to maximum bit rate.
uplink Flow MBR excd packet drop	Number of exceeded uplink packets dropped due to maximum bit rate.
downlink Flow MBR excd packet drop	Number of exceeded uplink packets dropped due to maximum bit rate.
uplink Flow GBR excd byte drop	Number of exceeded uplink bytes dropped due to guaranteed bit rate.
downlink Flow GBR excd byte drop	Number of exceeded downlink bytes dropped due to guaranteed bit rate.
uplink Flow GBR excd packet drop	Number of exceeded uplink packets dropped due to guaranteed bit rate.
downlink Flow GBR excd packet drop	Number of exceeded downlink packets dropped due to guaranteed bit rate.
uplink AMBR excd byte drop	Number of exceeded uplink bytes dropped due to APN Maximum bit rate.
downlink AMBR excd byte drop	Number of exceeded downlink bytes dropped due to APN Maximum bit rate.

Field	Description
uplink AMBR excd packet drop	Number of exceeded uplink packets dropped due to APN Maximum bit rate.
downlink AMBR excd packet drop	Number of exceeded downlink packets dropped due to APN Maximum bit rate.
uplink misc byte drop	Number of uplink bytes dropped due to miscellaneous reasons.
downlink misc byte drop	Number of downlink bytes dropped due to miscellaneous reasons.
uplink misc packet drop	Number of uplink packets dropped due to miscellaneous reasons.
downlink misc packet drop	Number of downlink packets dropped due to miscellaneous reasons.
ip bad hdr	The current total number IP packets received and dropped due to bad headers.
ip ttl exceeded	The current total number of IP packets dropped because they were received with TTL values of 0.
ip fragments sent	The current total number of number of times IP packets were fragmented before being sent over the Gi interface.
ip could not fragment	The current total number of IP packets which failed in fragmentation.
ip input acl drop	The current total number IP packets that were received and then dropped due to ACL filtering. NOTE: This counter may increment even if no ACL is configured.
ip output acl drop	The current total number of IP packets that were dropped prior to sending due to ACL filtering.
ip input css down drop	The current total number of IP packets the CSS received and then dropped.
ip output css down drop	The current total number of IP packets that were dropped prior to sending due to CSS filtering.
ip early pdu rcvd	The current total number of early IP packet data units (PDUs) received.
IP bad length trim	
ip source violations	The current total number of IP packets received for which source violations were detected and then dropped.
ip source violations no accounting	The IP packets received for source violations that were detected but not included in the statistics.
ip source violation ignored	The IP source validation violations that were detected and then ignored.
Subscriber Session Statistics	
Default bearers active	The total number of active default bearers.
Dedicated bearers active	The total number of active dedicated bearers.
Default bearers setup	The total number of setup default bearers.
Dedicated bearers setup	The total number of setup dedicated bearers.
Default bearers released	The total number of default bearers released.
Dedicated bearers released	The total number of dedicated bearers released.
Default bearers rel fail	The total number of default bearer release failed.

Field	Description
Dedicated bearers rel fail	The total number of dedicated bearer release failed.
Default bearers rejected	The total number of default bearers rejected.
Dedicated bearers rejected	The total number of dedicated bearers rejected.
UE-init mod	The total number of UE initiated bearer modifications.
Network-init mod	The total number of network initiated bearer modifications.
UE-init mod fail	The total number of ue initiated modifications failed.
Network-init mod fail	The total number of network initiated modifications failed.
Total PDN-Type stats	
PDN-Type IPv4 sessions active	The total number of pdn ipv4 active sessions.
PDN-Type IPv4 sessions setup	The total number pdn ipv4 setup sessions.
PDN-Type IPv4 sessions released	The total number of pdn ipv4 sessions released.
PDN-Type IPv6 sessions active	The total number of pdn ipv6 active sessions.
PDN-Type IPv6 sessions setup	The total number pdn ipv6 setup sessions.
PDN-Type IPv6 sessions released	The total number pdn ipv6 sessions released.
PDN-Type IPv4v6 sessions active	The total number of pdn ipv4v6 active sessions.
PDN-Type IPv4v6 sessions setup	The total number pdn ipv4v6 setup sessions.
PDN-Type IPv4v6 sessions released	The total number pdn ipv4v6 sessions released.
IP Address Allocation Statistics	
Total IPv4 addr allocated: Local pool add assign	The current total number of PDP contexts facilitated by the APN that were dynamically assigned IP addresses from pools configured locally on the system.
Total IPv4 addr allocated: Static addr assign	The current total number of PDP contexts facilitated by the APN that used static IP address.
Total IPv4 addr allocated: aaaprovided addr	The current total number of PDP contexts facilitated by the APN that were dynamically assigned IP addresses from a AAA server.
Total IPv4 addr allocated: skipped ip validation for L3 tunnels	The current total number of PDP contexts facilitated by the APN that were skipped validation for L3 tunnels.

Field	Description
Total IPv4 addrs allocated: DHCP proxy assign	The current total number of PDP contexts facilitated by the APN that were dynamically assigned IP addresses by the system using the DHCP client mode.
Total IPv4 addrs allocated: DHCP relay assign	The current total number of PDP contexts facilitated by the APN that were dynamically assigned IP addresses by the system using the DHCP relay mode.
Total IPv4 addrs allocated: No allocation	The current total number of PDP contexts facilitated by the APN that were not dynamically allocated IP addresses. This counters is relevant for a multicast sessions (MBMS) where IP allocation is not applicable.
Total IPv6 addrs allocated: Stateless auto config	The current total number ipv6 address allocation by stateless auto configuration.
Subscriber QoS Statistics	
QCI n: Bearer Active	The current total number of bearers with qci n active. Here n (qci-val) is the QCI for which the negotiate limit is being set, it ranges from 1 to 9.
QCI n: Bearer Setup	The current total number of bearers with qci n setup.
QCI n: Bearer Released	The current total number of bearers with qci n released.
QCI n: Uplink Bytes Forwarded	The current total number of uplink bytes forwarded for qci n.
QCI n: Downlink Bytes Forwarded	The current total number of downlink bytes forwarded for qci n.
QCI n: Uplink Packets Forwarded	The current total number of uplink packets forwarded for qci n.
QCI n: Downlink Packets Forwarded	The current total number of downlink packets forwarded for qci n.
QCI n: Uplink Bytes Dropped	The current total number of uplink bytes dropped for qci n.
QCI n: Downlink Bytes Dropped	The current total number of downlink bytes dropped for qci n.
QCI n: Uplink Packets Dropped	The current total number of uplink packets dropped for qci n.
QCI n: Downlink Packets Dropped	The current total number of downlink packets dropped for qci n.
Session statistics	
current contexts (selected APN(s))	The current total number of PDP contexts facilitated by the APN.
current contexts (system wide)	The current total number of PDP contexts facilitated by the entire system.
cumulative contexts (selected APN(s))	The cumulative number of PDP contexts facilitated by the APN.

Field	Description
cumulative contexts (system wide)	The cumulative number of PDP contexts facilitated by the entire system.
Current APN context load	Current APN context load = (current contexts (selected APN(s)) / current contexts (system wide)) * 100.
Cumulative APN context load	The cumulative percent utilization of the APN as function of the APN's configured maximum number of supported PDP contexts and the cumulative number of PDP contexts facilitated by the APN.
AAA Counters	
Authentication Counters	
Access-Request Sent	The total number of access requests that were sent.
Access-Request Timeouts	The total number of access request timeouts.
Accounting Counters	
Accounting-Request Sent	The total number of accounting requests that were sent.
Accounting-Response Received	The total number of accounting responses that were received.
Accounting-Request Timeouts	The total number of accounting request timeouts.
RADIUS Acct-Req purged	The total number of RADIUS accounting requests purged.
GTPP Acct-req purged	The total number of GTPP accounting requests purged.
GTPP sec Acct-req purged	The total number of secondary G-CDR accounting requests being processed and purged by this AAAMgr instance for which the GTPP protocol is being used to deliver the accounting message to the Charging Gateway Function (CGF) . It counts total secondary G-CDR accounting requests purged by this AAAMgr instance
GTPP Chrg-req purged	The total number of GTPP charging requests purged.
GTPP sec Chrg-req purged	The total number of secondary eG-CDR charging requests being processed and purged by this AAAMgr instance for which the GTPP protocol is being used to deliver the charging message to the Charging Gateway Function (CGF) . It counts total secondary eG-CDR charging requests purged by this AAAMgr instance

Chapter 73

show asngw-service

This chapter includes the `show asngw-service` command output tables.

show asngw-service all

Table 151. show asngw-service all Command Output Descriptions

Field	Description
Service name	The ASN GW service name.
Context	The context in which the service is configured.
Bind	The bind status.
Max Subscribers	The maximum number of subscribers.
IP address	IP address of ASN GW server where this service is located.
UDP Port	The UDP port number.
Service Status	Status of this service.
Authentication	The authentication mode. Possible modes are: • None • User (Single EAP) • Device (Single EAP) • Device-User (Double EAP) • Device-User (Single EAP)
Policy msid-dhcp-chaddr-mismatch	Indicates the status of the policy to handle the calls with mismatched DHCP Client Hardware (MAC) Address (CHADDR) and MSID of the ASN-GW session.
Policy ms-unexpected-network-reentry	Indicates the status of the policy to handle the unexpected network re-entry of an MS.
Policy asngw-initiated-reauth	Indicates the status of the policy to handle the ASN GW initiated reauthorization trigger.
Policy non-anchor-mode	Indicates the status of the policy to handle the ASN GW to accept the session in non-anchor mode.
Newcall Policy	Specify that the new call policy enabled or disabled to handle new calls. Possible values are: • NONE • REJECT
Policy Overload	Specify that the session overload policy enabled or disabled to handle new calls. Possible values are: • DROP • REJECT
Mobile IP FA context	The name of the context where MIP FA service is configured.
Maximum number of retransmissions	The maximum number of retransmissions.
Retransmission timeout	The retransmission timeout duration.

Field	Description
Setup timeout	The session setup timeout duration.
Active-relay timeout	Indicates the timeout duration for active relay of R4 or R6 messages.
Handover anchor data-path termination timeout	Indicates the timeout duration in seconds to keep the data path registration with previous anchored BS after completion of handover.
Handover anchor data-path pre-registration termination timeout	Indicates the timeout duration in seconds to keep the data path pre-registration termination information with anchored BS after completion of handover.
Handover non-anchor data-path termination timeout	Indicates the timeout duration in seconds to keep the data path registration with non-anchored BS after completion of handover.
Handover non-anchor data-path pre-registration termination timeout	Indicates the timeout duration in seconds to keep the data path pre-registration termination information with non-anchored BS after completion of handover.
Handover max number of data-path pre-registrations	Indicates the maximum number of data paths created during pre-registration for a handover.
Idle-mode entry timeout	Indicates the timeout duration in seconds for a session to enter the idle mode from active mode.
Idle-mode exit timeout	Indicates the timeout duration in seconds for a session to reenter the active mode from idle mode.
Idle-mode timeout	Indicates the total timeout duration in seconds.
Policy transaction-id-validation	Indicates the status of the policy to validate the transaction id.
Policy zero-function-type	Indicates the status of the policy to allow the zero function type of call.
Transaction Id. Seed	Indicates the transaction identifier seed.
Peer ASNGW addresses	Indicates the IP addresses of trusted ASN GW peers for handover.
BS Monitor Config	Indicates the status of BS monitoring support. Possible values are: • Enabled • Disabled
Interval	Indicates the configured amount of time in seconds between two ICMP ping message to an ASN BS.
Timeout	Indicates the number of seconds to wait for response from the ASN BS before re-sending the ICMP ping message.
Number of retries	Indicates the number of retries to sent ICMP ping messages to an ASN BS before the ASN BS is declared as dead/unreachable.
MTU size	Indicates the maximum transmission unit size configured in bytes.
Total BSs	Indicates the total number of BSs monitored.
Active BSs	Indicates number of active BSs.
Alive BSs	Indicates number of active and alive BSs.
ICMP Monitored BSs	Indicates the number of BSs which are monitored through ICMP ping messages.
Inactive BSs	Indicates number of inactive BSs.

■ show asngw-service all

Field	Description
No Calls BSs	Indicates the total number of BSs which have no active calls or in idle mode.
Going Down BSs	Indicates the total number of BSs which are going down or terminating sessions.
BS	Indicates the IP address of BSs.
Status	Indicates the status of listed BSs.
Maximum Number of Secondary IP Hosts	Indicates the maximum number of secondary hosts connected behind a primary WiMAX CPE under multiple IP host support.
Ran Peer Map Name	The name of the RAN Peer Map this service is using to reconcile base station MAC address received in R6 protocol messages to the actual IPv4 address of the base station.

show asngw-service session all

Table 152. show asngw-service session all Command Output Descriptions

Field	Description
vv	Displays service and session state information. This column provides a code consisting of two characters. From left-to-right, the first character represents the Call Type that the subscriber is using. The possible call types are: • A: Anchor • N: Non-Anchor From left-to-right, the second character represents the DP Status. The possible data path status are: • A: Active • I: Idle
CALLID	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
NAI	The subscriber's Network Access Identifier.
Home Address	The IP address assigned to the subscriber's mobile node for the duration of the session.
Total Non-Anchor ASNGW Sessions	The total number of ASNGW sessions in non-anchor mode.
Total Anchor ASNGW Sessions	The total number of ASNGW sessions in anchor mode.
Total Active ASNGW Sessions	The total number of active ASNGW sessions including anchor and non-anchor mode.
Total Idle ASNGW Sessions	The total number of idle ASNGW sessions including anchor and non-anchor mode.
Total ASNGW Sessions	The total number of ASNGW sessions on chassis including all modes.

show asngw-service session counters

Table 153. show asngw-service session counters Command Output Descriptions

Field	Description
Username	The subscriber's user name.
Callid	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
Session Type	Indicates the type of session. Possible type of sessions are: • Anchor • Non-Anchor
Initial Network Entry Events	
MS Pre-Attach	Displays the MS pre-attach event statistics.
Attempted	Indicates the total number of attempts made for an event.
Success	Indicates the total number of successful attempts made for an event.
Failures	Indicates the total number of failed attempts made for an event.
Authentications	Displays the authentication event statistics.
EAP	Indicates the total number of authentication/re-authentication attempts failed due to EAP.
Misc. Reason	Indicates the total number of authentication/re-authentication attempts failed due to miscellaneous reasons.
MS Attach	Displays the MS attach event statistics.
DP Registrations	Displays the data path registration event statistics.
Re-Authentications	Displays the re-authentication event statistics.
Handover Events	
Intra ASN-GW Handovers	Displays the intra-ASN GW (inter BS) handover event statistics.
Inter ASN-GW Handovers	Displays the inter-ASN GW handover event statistics.
DP De-Registrations	Displays the data path de-registration event statistics.
Idle Mode entry events	Displays the idle mode entry event statistics.
Idle Mode exit events	Displays the idle mode exit event statistics.
Paging initiation events	Displays the paging initiation event statistics.
Total R6/R4 Control Messages	Displays the statistics of total R4 and R6 control messages.
Sent	Total number of R4/R6 control messages sent.
Retransmissions Sent	Total number of R4/R6 control messages retransmitted.

Field	Description
Received	The total number of R4/R6 control messages received.
Accepted	The total number of R4/R6 control messages received and accepted.
Relayed	The total number of R4/R6 control messages received and relayed.
Denied	The total number of R4/R6 control messages received and denied.
Discarded	The total number of R4/R6 control messages received and discarded.
Badly Formed	The total number of badly formed R4/R6 control messages.
Decode Error	The total number of decode errors found in the R4/R6 control messages.
Unspecified Error	The total number of unspecified errors found in the R4/R6 control messages.
Missing Mandatory TLV	The total number of R4/R6 control messages received with missing mandatory TLVs.
TLV Value Invalid	The total number of R4/R6 control messages received with invalid TLV value.
Unknown TLV	The total number of R4/R6 control messages received with unknown TLV value.
Duplicate TLV Found	The total number of R4/R6 control messages received with duplicate TLV value.
No Session Found	The total number of R4/R6 control messages received without session information.
Transaction Id. Error	The total number of R4/R6 control messages received with error in transaction id.
Key Change Success	The total number of R4/R6 control messages received with successful Key Change request.
Key Change Failure	The total number of R4/R6 control messages with failed Key Change request.
MS Initiated Re-Auth	The total number of R4/R6 control messages received with for MS initiated re-authentication.
BS Initiated Re-Auth	The total number of R4/R6 control messages received with for BS initiated re-authentication.
Total R4/R6 Data messages:	Displays the statistics of total R4 and R6 data messages.
GRE Receive:	
Packets Received	The total number of packets received by the system through GRE tunnel.
Bytes Received	The total number of bytes received by the system through GRE tunnel.
Protocol Type Error	The total number of encapsulated packets received through GRE tunnel with protocol type errors.
GRE Key Absent	Total number of GRE tunneled key absent errors received through GRE tunnel.
GRE Checksum Error	Total number of checksum errors that occurred in GRE tunnels received by this system.
Invalid Packet Length	Total number of encapsulated packets received with invalid packet lengths through GRE tunnel.
No Session found	Total number of errors that occurred due to no session being present in received tunnels.
Unspecified Error	Total number of data messages received with errors which are not specified in this table.
GRE Send:	
Packets Sent	The total number of packets sent by the system through GRE tunnel.
Bytes Sent	The total number of bytes sent by the system through GRE tunnel.

■ show asngw-service session counters

Field	Description
Send Error	The total number of errors that occurred while sending replies through GRE tunnel.
Unspecified Error	Total number of data messages sent with errors which are not specified in this table through GRE tunnel.
Total Non-Anchor ASNGW Sessions	The total number of ASN GW sessions in non-anchor mode.
Total Anchor ASNGW Sessions	The total number of ASN GW sessions in anchor mode.
Total ASNGW Sessions	The total number of ASN GW sessions including anchor and non-anchor mode.

show asngw-service session counters verbose

Table 154. show asngw-service session counters verbose Command Output Descriptions

Field	Description
Username	The subscriber's user name.
Callid	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
Session Type	Indicates the type of session. Possible type of sessions are: - Anchor - Non-Anchor
Message Groups	
R6 MS Pre-Attachment Request messages	Groups the statistics of the MS pre-attachment request messages on R6 interface.
R6 MS Pre-Attachment Response messages	Groups the statistics of the MS pre-attachment response messages on R6 interface.
R6 MS Pre-Attachment Ack messages	Groups the statistics of the MS pre-attachment ACK messages on R6 interface.
R6 Network Exit MS State Change Request messages	Groups the statistics of the MS state change request messages on network exit R6 interface.
R4 Network Exit MS State Change Request messages	Groups the statistics of the MS state change request messages on network exit R4 interface.
R6 Network Exit MS State Change Response messages	Groups the statistics of the MS state change response messages on network exit R6 interface.
R4 Network Exit MS State Change Response messages	Groups the statistics of the MS state change response messages on network exit R4 interface.
R6 Context Request messages	Groups the statistics of the context request messages on R6 interface.
R4 Context Request messages	Groups the statistics of the context request messages on R4 interface.
R6 Context Report messages	Groups the statistics of the context report messages on R6 interface.
R4 Context Report messages	Groups the statistics of the context report messages on R4 interface.
R6 Context Ack messages	Groups the statistics of the context ACK messages on R6 interface.
R4 Context Ack messages	Groups the statistics of the context ACK messages on R4 interface.
R6 Authentication Relay EAP Transfer messages	Groups the statistics of the EAP authentication relay transfer messages on R6 interface.
R4 Authentication Relay EAP Transfer messages	Groups the statistics of the EAP authentication relay transfer messages on R4 interface.

Field	Description
R6 Authentication Relay EAP Start messages	Groups the statistics of the EAP authentication relay start messages on R6 interface.
R4 Authentication Relay EAP Start messages	Groups the statistics of the EAP authentication relay start messages on R4 interface.
R6 MS Attachment Request messages	Groups the statistics of the MS attachment request messages on R6 interface.
R6 MS Attachment Response messages	Groups the statistics of the MS attachment response messages on R6 interface.
R6 MS Attachment Ack messages	Groups the statistics of the MS attachment ACK messages on R6 interface.
R6 Data-Path Pre-Registration Request messages	Groups the statistics of the datapath pre-registration request messages on R6 interface.
R4 Data-Path Pre-Registration Request messages	Groups the statistics of the datapath pre-registration request messages on R4 interface.
R6 Data-Path Pre-Registration Response messages	Groups the statistics of the datapath pre-registration response messages on R6 interface.
R4 Data-Path Pre-Registration Response messages	Groups the statistics of the datapath pre-registration response messages on R4 interface.
R6 Data-Path Pre-Registration Ack messages	Groups the statistics of the datapath pre-registration ACK messages on R6 interface.
R4 Data-Path Pre-Registration Ack messages	Groups the statistics of the datapath pre-registration ACK messages on R4 interface.
R6 Data-Path Registration Request messages	Groups the statistics of the datapath registration request messages on R6 interface.
R4 Data-Path Registration Request messages	Groups the statistics of the datapath registration request messages on R4 interface.
R6 Data-Path Registration Response messages	Groups the statistics of the datapath registration response messages on R6 interface.
R4 Data-Path Registration Response messages	Groups the statistics of the datapath registration response messages on R4 interface.
R6 Data-Path Registration Ack messages	Groups the statistics of the datapath registration ACK messages on R6 interface.
R4 Data-Path Registration Ack messages	Groups the statistics of the datapath registration ACK messages on R4 interface.
R6 Data-Path De-Registration Request messages	Groups the statistics of the datapath de-registration request messages on R6 interface.
R4 Data-Path De-Registration Request messages	Groups the statistics of the datapath de-registration request messages on R4 interface.
R6 Data-Path De-Registration Response messages	Groups the statistics of the datapath de-registration response messages on R6 interface.

Field	Description
R4 Data-Path De-Registration Response messages	Groups the statistics of the data path de-registration response messages on R4 interface.
R6 Data-Path De-Registration Ack messages	Groups the statistics of the data path de-registration ACK messages on R6 interface.
R4 Data-Path De-Registration Ack messages	Groups the statistics of the data path de-registration ACK messages on R4 interface.
R6 Key Change Directive messages	Groups the statistics of the key change directive messages on R6 interface.
R4 Key Change Directive messages	Groups the statistics of the key change directive messages on R4 interface.
R6 Key Change Ack messages	Groups the statistics of the key change ACK messages on R6 interface.
R4 Key Change Ack messages	Groups the statistics of the key change ACK messages on R4 interface.
R6 Key Change Confirm messages	Groups the statistics of the key change confirm messages on R6 interface.
R4 Key Change Confirm messages	Groups the statistics of the key change confirm messages on R4 interface.
R6 Cmac Key Count Update Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count update messages on R6 interface.
R4 Cmac Key Count Update Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count update messages on R4 interface.
R6 Cmac Key Count Ack Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count ACK messages on R6 interface.
R4 Cmac Key Count Ack Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count ACK messages on R4 interface.
R6 Handoff Request Msg	Groups the statistics of the hand-off request messages on R6 interface.
R4 Handoff Request Msg	Groups the statistics of the hand-off request messages on R4 interface.
R6 Handoff Response Msg	Groups the statistics of the hand-off response messages on R6 interface.
R4 Handoff Response Msg	Groups the statistics of the hand-off response messages on R4 interface.
R6 Handoff Ack Msg	Groups the statistics of the hand-off ACK messages on R6 interface.
R4 Handoff Ack Msg	Groups the statistics of the hand-off ACK messages on R4 interface.
R6 Handoff Confirm Msg	Groups the statistics of the hand-off confirm messages on R6 interface.
R4 Handoff Confirm Msg	Groups the statistics of the hand-off confirm messages on R4 interface.
R6 Handoff Complete Msg	Groups the statistics of the hand-off complete messages on R6 interface.
R4 Handoff Complete Msg	Groups the statistics of the hand-off complete messages on R4 interface.
R4 IM Entry State Change Req Msg	Groups the statistics of the idle mode entry state change request messages on R4 interface.

Field	Description
R4 IM Entry State Change Rsp Msg	Groups the statistics of the idle mode entry state change response messages on R4 interface.
R4 IM Entry State Change Ack Msg	Groups the statistics of the idle mode entry state change ACK messages on R4 interface.
R4 Anchor PC Indication Msg	Groups the statistics of anchor paging controller (PC) indication messages on R4 interface.
R4 Anchor PC Ack Msg	Groups the statistics of anchor paging controller (PC) ACK messages on R4 interface.
R4 IM Exit State Change Req Msg	Groups the statistics of the idle mode exit state change request messages on R4 interface.
R4 IM Exit State Change Rsp Msg	Groups the statistics of the idle mode exit state change response messages on R4 interface.
R4 Initiate Paging Req Msg	Groups the statistics of the initiated paging request messages on R4 interface.
R4 Initiate Paging Rsp Msg	Groups the statistics of the initiated paging response messages on R4 interface.
R4 Delete MS Entry Req Msg	Groups the statistics of the request messages to delete the MS entry request on R4 interface.
R4 Delete MS Entry Rsp Msg	Groups the statistics of the messages sent in response of delete message for the MS entry request on R4 interface.
R6 Unknown messages	Groups the statistics of the unknown type of request messages on R6 interface.
R4 Unknown messages	Groups the statistics of the unknown type of request messages on R4 interface.
Message Statistics	
Total Sent	The total number of this type of message sent on specific interface.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Retransmissions Sent	The total number of this type of message re-transmitted on specific interface.
Total Received	The total number of this type of message received on specific interface.
Total Accepted	The total number of this type of message accepted on specific interface.
Total Relayed	The total number of this type of message relayed on specific interface.
Total Denied	The total number of this type of message denied on specific interface.
Total Discarded	The total number of this type of message discarded on specific interface.
Badly Formed	The total number of badly formed this type of message on specific interface.
Decode Error	The total number of this type of message on specific interface with decode error.
Unspecified Error	The total number of this type of message on specific interface with unspecified error.
Missing Mandatory TLV	The total number of this type of message on specific interface with missing mandatory TLVs.
TLV Value Invalid	The total number of this type of message on specific interface with invalid TLV value.
Unknown TLV	The total number of this type of message on specific interface with unknown TLVs.
Duplicate TLV Found	The total number of this type of message on specific interface with duplicate TLVs.

Field	Description
No session Found	The total number of this type of message on specific interface without any session information.
Transaction Id. Error	The total number of this type of message on specific interface. with transaction id error.
Key Change Success	The total number of successful Key Change Confirmation messages.
Key Change Failure	The total number of Key Change Confirmation messages failed.
Out Of Order Packet	The total number of authentication relay EAP transfer/start messages on R6 interface with out-of-order packets.
MS Initiated Re-Auth	The total number of authentication relay EAP start messages on specific interface with MS initiated reauthorization.
BS Initiated Re-Auth	The total number of authentication relay EAP start messages on specific interface with BS initiated reauthorization.
ASNGW Initiated Re-Auth	Total number of the re-authentications initiated from the ASNGW.
Data messages	
GRE R6 Receive	The total number of data message received with through GRE tunnel on R6 interface.
GRE R4 Receive	The total number of data message received through GRE tunnel on R4 interface.
Packets Received	The total number of data packets received/sent through GRE tunnel on R4/R6 interface.
Bytes Received	The total number of data bytes received/sent through GRE tunnel on R4/R6 interface.
Protocol Type Error	The total number of data message received/sent with protocol type error through GRE tunnel on R4/R6 interface.
GRE Key Absent	The total number of data message received/sent without GRE key through GRE tunnel on R4/R6 interface.
GRE Checksum Error	The total number of data message received/sent with checksum error through GRE tunnel on R4/R6 interface.
Invalid Packet Length	The total number of data message received/sent with invalid packet length through GRE tunnel on R4/R6 interface.
No Session found	The total number of data message received/sent without any session information through GRE tunnel on R4/R6 interface.
Unspecified Error	The total number of data message received/sent with unknown error through GRE tunnel on R4/R6 interface.
GRE R6 Send	The total number of data message sent through GRE tunnel on R6 interface.
GRE R4 Send	The total number of data message sent through GRE tunnel on R4 interface.
Packets Sent	The total number of data packets sent through GRE tunnel on R4/R6 interface.
Send Error	The total number of data message sent with error through GRE tunnel on R4/R6 interface.
Bytes Sent	The total number of data bytes sent through GRE tunnel on R4/R6 interface.

show asngw-service session full

Table 155. show asngw-service session full Command Output Descriptions

Field	Description
Username	The subscriber's user name.
Callid	The subscriber's call identification number.
Pseudoname	The subscriber's pseudo name. It provides the pseudo user name for a WIMAX session if TTLS authentication is used for the call.
MSID	The subscriber's Mobile Station Identification number.
Home Address	The IP address assigned to the subscriber's mobile node for the duration of the session.
ASNGW Service Address	IP address of system where ASN GW service is running.
Session Type	Indicates the type of session. Possible type of sessions are: • Anchor • Non-Anchor
DP Status	Indicates the status of data path. Possible datapath status are: • Active • Idle
Authenticator Address	IP address of the authenticator ASNGW.
Anchor Address	IP address of the anchor ASNGW where subscriber is attached.
Data Path Status	Identifies if the call can carry data over the R6/R4 interface. Idle: the ASNGW is attached to PCLR and is not capable of sending traffic to BS over R6/R4. Active: the IP-GRE tunnels between the ASNGW and the BS are setup and ready to transfer data from the IP network side.
PCLR Address	IP address of PC-LR currently attached to this ASNGW.
CMAC Key Count	Total number of Cipher-based Message Authentication Code (CMAC) key count.
EAP MSK Lifetime	Total lifetime configured for EAP Master Session Key in seconds.
Remaining MSK Lifetime	Remaining lifetime available for EAP Master Session Key in seconds.
Number of Re-authentication	Total number of re-authentications happened for a WiMAX subscriber.
Authentication Mode	The authentication mode. Possible modes are: • None • User (Single EAP) • Device (Single EAP) • Device-User (Double EAP) • Device-User (Single EAP)

Field	Description
EAP-Methods	Specifies the EAP authentication method. Possible methods are: • EAP-Pre-shared Key (EAP-PSK) • EAP-Transport Layer Security (EAP-TLS) • EAP-Tunneled Transport Layer Security (EAP-TTLS) • EAP-Authentication and Key Agreement (EAP-AKA)
DHCP ChAddr of MS	Client Hardware (MAC) Address (CHADDR) of MS.
Service Flow Information	
SFID	The service flow identifier.
Direction	Direction of the service flow.
SDFID	The service data flow identifier.
PDFID	The packet data flow identifier.
Profile ID	The profile id applicable for service flow.
Peer (*) Address	Specifies the IP address of the trusted peer for handover.
Peer Type	Specifies the type of peer for handover. Possible types are: • BS • ASN GW
BSID	Specifies the ASN base station Id.
GRE Key	The Generic Routing Encapsulation (GRE) key.
Tunnel Endpoint	Indicates the IP address of GRE tunnel endpoint.
Total Service flows(unidirectional)	Total number of service flows in both direction.
Total Non-Anchor ASNGW Sessions	The total number of ASN GW sessions in non-anchor mode.
Total Anchor ASNGW Sessions	The total number of ASN GW sessions in anchor mode.
Total Active ASNGW Sessions	The total number of active ASN GW sessions.
Total Idle ASNGW Sessions	The total number of ASN GW sessions in idle mode.
Total ASNGW Sessions	The total number of ASN GW sessions including anchor and non-anchor mode.

show asngw-service session counters function-type data-path

Table 156. show asngw-service session counters function-type data-path Command Output Descriptions

Field	Description
Username	The subscriber's user name.
CALLID	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
Data-Path Registration Request Messages:	
Total Sent	The total number of Data-Path Registration Request messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path Registration Request messages received.
Total Denied	The total number of Data-Path Registration Request messages denied.
Total Discarded	The total number of Data-Path Registration Request messages discarded.
Badly Formed	The total number of badly formed Data-Path Registration Request messages.
Decode Error	The total number of decode errors in the Data-Path Registration Request messages sent.
Unspecified Error	The total number of unspecified errors in the Data-Path Registration Request messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path Registration Request messages sent.
TLV Value Invalid	The total number of Data-Path Registration Request messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path Registration Request messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path Registration Request messages sent with duplicate TLV.
No Session Found	The total number of Data-Path Registration Request messages sent without session information.
Data-Path Registration Response Messages:	
Total Sent	The total number of Data-Path Registration Response messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path Registration Response messages received.
Total Denied	The total number of Data-Path Registration Response messages denied.
Total Discarded	The total number of Data-Path Registration Response messages discarded.
Badly Formed	The total number of badly formed Data-Path Registration Response messages.
Decode Error	The total number of decode errors in the Data-Path Registration Response messages sent.

Field	Description
Unspecified Error	The total number of unspecified errors in the Data-Path Registration Response messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path Registration Response messages sent.
TLV Value Invalid	The total number of Data-Path Registration Response messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path Registration Response messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path Registration Response messages sent with duplicate TLV.
No Session Found	The total number of Data-Path Registration Response messages sent without session information.
Data-Path Registration Ack Messages:	
Total Sent	The total number of Data-Path Registration Request Ack messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path Registration Request Ack messages received.
Total Denied	The total number of Data-Path Registration Request Ack messages denied.
Total Discarded	The total number of Data-Path Registration Request Ack messages discarded.
Badly Formed	The total number of badly formed Data-Path Registration Request Ack messages.
Decode Error	The total number of decode errors in the Data-Path Registration Request Ack messages sent.
Unspecified Error	The total number of unspecified errors in the Data-Path Registration Request Ack messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path Registration Request Ack messages sent.
TLV Value Invalid	The total number of Data-Path Registration Request Ack messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path Registration Request Ack messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path Registration Request Ack messages sent with duplicate TLV.
No Session Found	The total number of Data-Path Registration Request Ack messages sent without session found.
Data-Path De-Registration Request Messages:	
Total Sent	The total number of Data-Path De-Registration Request messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path De-Registration Request messages received.
Total Denied	The total number of Data-Path De-Registration Request messages denied.
Total Discarded	The total number of Data-Path De-Registration Request messages discarded.
Badly Formed	The total number of badly formed Data-Path De-Registration Request messages.
Decode Error	The total number of decode errors in the Data-Path De-Registration Request messages sent.

Field	Description
Unspecified Error	The total number of unspecified errors in the Data-Path De-Registration Request messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path De-Registration Request messages sent.
TLV Value Invalid	The total number of Data-Path De-Registration Request messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path De-Registration Request messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path De-Registration Request messages sent with duplicate TLV.
No Session Found	The total number of Data-Path De-Registration Request messages sent without session information.
Data-Path De-Registration Response Messages:	
Total Sent	The total number of Data-Path De-Registration Response messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Data-Path De-Registration Response messages received.
Total Denied	The total number of Data-Path De-Registration Response messages denied.
Total Discarded	The total number of Data-Path De-Registration Response messages discarded.
Badly Formed	The total number of badly formed Data-Path De-Registration Response messages.
Decode Error	The total number of decode errors in the Data-Path De-Registration Response messages sent.
Unspecified Error	The total number of unspecified errors in the Data-Path De-Registration Response messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Data-Path De-Registration Response messages sent.
TLV Value Invalid	The total number of Data-Path De-Registration Response messages sent with invalid TLV value.
Unknown TLV	The total number of Data-Path De-Registration Response messages sent with unknown TLV.
Duplicate TLV Found	The total number of Data-Path De-Registration Response messages sent with duplicate TLV.
No Session Found	The total number of Data-Path De-Registration Response messages sent without session information.
Total ASNGW Sessions	The total number of ASNGW messages.

show asngw-service session peer-address

Table 157. show asngw-service session peer-address Command Output Descriptions

Field	Description
vv	Displays service and session state information. This column provides a code consisting of two characters. From left-to-right, the first character represents the Call Type that the subscriber is using. The possible call types are: • A: Anchor • N: Non-Anchor From left-to-right, the second character represents the DP Status. The possible data path status are: • A: Active • I: Idle
CALLID	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
NAI	The subscriber's Network Access Identifier.
Home Address	The IP address assigned to the subscriber's mobile node for the duration of the session.
Total Non-Anchor ASNGW Sessions	The total number of ASNGW sessions in non-anchor mode.
Total Anchor ASNGW Sessions	The total number of ASNGW sessions in anchor mode.
Total Active ASNGW Sessions	The total number of active ASNGW sessions including anchor and non-anchor mode.
Total Idle ASNGW Sessions	The total number of idle ASNGW sessions including anchor and non-anchor mode.
Total ASNGW Sessions	The total number of ASNGW sessions on chassis including all modes.

show asngw-service session summary

Table 158. show asngw-service session summary Command Output Descriptions

Field	Description
Total Non-Anchor ASNGW Sessions	The total number of ASN GW sessions in non-anchor mode.
Total Anchor ASNGW Sessions	The total number of ASN GW sessions in anchor mode.
Total Active ASNGW Sessions	The total number of active ASN GW sessions including anchor and non-anchor mode.
Total Idle ASNGW Sessions	The total number of idle ASN GW sessions including anchor and non-anchor mode.
Total ASNGW Sessions	The total number of ASN GW sessions on chassis including all modes.

show asngw-service statistics

Table 159. show asngw-service statistics Command Output Descriptions

Field	Description
Initial Network Entry Events	
MS Pre-Attach	Displays the MS pre-attach event statistics.
Attempted	Indicates the total number of attempts made for an event.
Success	Indicates the total number of successful attempts made for an event.
Failures	Indicates the total number of failed attempts made for an event.
Authentications	Displays the authentication event statistics.
EAP	Indicates the total number of authentication/re-authentication attempts failed due to EAP.
Misc. Reason	Indicates the total number of authentication/re-authentication attempts failed due to miscellaneous reasons.
MS Attach	Displays the MS attach event statistics.
Re-Authentications	Displays the re-authentication event statistics.
Handover Events	
Intra ASN-GW Handovers	Displays the intra-ASN GW (inter BS) handover event statistics.
Inter ASN-GW Handovers	Displays the inter-ASN GW handover event statistics.
DP Pre-registration	Displays the data path pre-registration event statistics.
DP Registration	Displays the data path registration event statistics.
DP De-Registration	Displays the data path de-registration event statistics.
Idle Mode entry events	Displays the idle mode entry event statistics.
Idle Mode exit events	Displays the idle mode exit event statistics.
Paging initiation events	Displays the paging initiation event statistics.
Total Disconnects	Displays the reason statistics for the disconnection of session.
MSK Lifetime Expiry	Indicates the total number of disconnects due to Master Session Key lifetime expiry.
Auth Failures	Indicates the total number of disconnects due to authentication failure.
Admin Drops	Indicates the total number of disconnects due to administrator intervention.
De-registrations	Indicates the total number of disconnects due to de-registration request initiation.
Other Reasons	Indicates the total number of disconnects due to unspecified reasons.
Total R6/R4 Control Messages	Displays the statistics of total R4 and R6 control messages.

Field	Description
Sent	Total number of R4/R6 control messages sent.
Retransmissions Sent	Total number of R4/R6 control messages retransmitted.
Received	Total number of R4/R6 control messages received.
Accepted	Total number of R4/R6 control messages received and accepted.
Relayed	Total number of R4/R6 control messages received and relayed.
Denied	Total number of R4/R6 control messages received and denied.
Discarded	Total number of R4/R6 control messages received and discarded.
Badly Formed	Total number of badly formed R4/R6 control messages.
Decode Error	Total number of decode errors found in the R4/R6 control messages.
Unspecified Error	Total number of unspecified errors found in the R4/R6 control messages.
Missing Mandatory TLV	Total number of R4/R6 control messages received with missing mandatory TLVs.
TLV Value Invalid	Total number of R4/R6 control messages received with invalid TLV value.
Unknown TLV	Total number of R4/R6 control messages received with unknown TLV value.
Duplicate TLV Found	Total number of R4/R6 control messages received with duplicate TLV value.
No Session Found	Total number of R4/R6 control messages received without session information.
Transaction Id. Error	Total number of R4/R6 control messages received with error in transaction id.
Key Change Success	Total number of R4/R6 control messages received with successful Key Change request.
Key Change Failures	Total number of R4/R6 control messages with failed Key Change request.
MS Initiated Re-Auth	Total number of R4/R6 control messages received with for MS initiated re-authentication.
BS Initiated Re-Auth	Total number of R4/R6 control messages received with for BS initiated re-authentication.
ASNGW Initiated Re-Auth	Total number of the re-authentications initiated from the ASN GW.
Total R4/R6 Data messages:	Displays the statistics of total R4 and R6 data messages.
GRE Receive:	
Total Packets Received	Total number of packets received by the system through GRE tunnel.
Total Bytes Received	Total number of bytes received by the system through GRE tunnel.
Protocol Type Error	Total number of encapsulated packets received through GRE tunnel with protocol type errors.
GRE Key Absent	Total number of GRE tunneled key absent errors received through GRE tunnel.
GRE Checksum Error	Total number of checksum errors that occurred in GRE tunnels received by this system.
Invalid Packet Length	Total number of encapsulated packets received with invalid packet lengths through GRE tunnel.
No Session found	Total number of errors that occurred due to no session being present in received tunnels.
Unspecified Error	Total number of data messages received with errors which are not specified in this table.
GRE Send:	

Field	Description
Total Packets Sent	Total number of packets sent by the system through GRE tunnel.
Total Bytes Sent	Total number of bytes sent by the system through GRE tunnel.
Send Error	Total number of errors that occurred while sending replies through GRE tunnel.
Unspecified Error	Total number of data messages sent with errors which are not specified in this table through GRE tunnel.
Total Sessions Connected	Historical count of the total number of ASNGW sessions setup on a per-service and a per-chassis basis.

show asngw-service statistics function-type ms-state-change

Table 160. show asngw-service statistics function-type ms-state-change Command Output Descriptions

Field	Description
Network Entry MS State Change Request Messages:	
Total Sent	The total number of Network Entry MS State Change Request messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Network Entry MS State Change Request messages received.
Total Denied	The total number of Network Entry MS State Change Request messages denied.
Total Discarded	The total number of Network Entry MS State Change Request messages discarded.
Badly Formed	The total number of badly formed Network Entry MS State Change Request messages.
Decode Error	The total number of decode errors in the Network Entry MS State Change Request messages sent.
Unspecified Error	The total number of unspecified errors in the Network Entry MS State Change Request messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Network Entry MS State Change Request messages sent.
TLV Value Invalid	The total number of Network Entry MS State Change Request messages sent with invalid TLV value.
Unknown TLV	The total number of Network Entry MS State Change Request messages sent with unknown TLV.
Duplicate TLV Found	The total number of Network Entry MS State Change Request messages sent with duplicate TLV.
No Session Found	The total number of Network Entry MS State Change Request messages sent without session information.
Network Entry MS State Change Response Messages:	
Sent	The total number of Network Entry MS State Change Response messages sent.
Total Received	The total number of Network Entry MS State Change Response messages received.
Total Denied	The total number of Network Entry MS State Change Response messages denied.
Total Discarded	The total number of Network Entry MS State Change Response messages discarded.
Badly Formed	The total number of badly formed Network Entry MS State Change Response messages.
Decode Error	The total number of decode errors in the Network Entry MS State Change Response messages sent.
Unspecified Error	The total number of unspecified errors in the Network Entry MS State Change Response messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Network Entry MS State Change Response messages sent.
TLV Value Invalid	The total number of Network Entry MS State Change Response messages sent with invalid TLV value.
Unknown TLV	The total number of Network Entry MS State Change Response messages sent with unknown TLV.

Field	Description
Duplicate TLV Found	The total number of Network Entry MS State Change Response messages sent with duplicate TLV.
No Session Found	The total number of Network Entry MS State Change Response messages sent without session information.
Network Entry MS State Change Directive Messages:	
Total Sent	The total number of Network Entry MS State Change Directive messages sent.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Total Received	The total number of Network Entry MS State Change Directive messages received.
Total Denied	The total number of Network Entry MS State Change Directive messages denied.
Total Discarded	The total number of Network Entry MS State Change Directive messages discarded.
Badly Formed	The total number of badly formed Network Entry MS State Change Directive messages.
Decode Error	The total number of decode errors in the Network Entry MS State Change Directive messages sent.
Unspecified Error	The total number of unspecified errors in the Network Entry MS State Change Directive messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Network Entry MS State Change Directive messages sent.
TLV Value Invalid	The total number of Network Entry MS State Change Directive messages sent with invalid TLV value.
Unknown TLV	The total number of Network Entry MS State Change Directive messages sent with unknown TLV.
Duplicate TLV Found	The total number of Network Entry MS State Change Directive messages sent with duplicate TLV.
No Session Found	The total number of Network Entry MS State Change Directive Request messages sent without session information.
Network Entry MS State Change Ack Messages:	
Total Sent	The total number of Network Entry MS State Change Ack messages sent.
Total Received	The total number of Network Entry MS State Change Ack messages received.
Total Denied	The total number of Network Entry MS State Change Ack messages denied.
Total Discarded	The total number of Network Entry MS State Change Ack messages discarded.
Badly Formed	The total number of badly formed Network Entry MS State Change Ack messages.
Decode Error	The total number of decode errors in the Network Entry MS State Change Ack messages sent.
Unspecified Error	The total number of unspecified errors in the Network Entry MS State Change Ack messages sent.
Missing Mandatory TLV	The total number of missing mandatory TLVs in the Network Entry MS State Change Ack messages sent.
TLV Value Invalid	The total number of Network Entry MS State Change Ack messages sent with invalid TLV value.
Unknown TLV	The total number of Network Entry MS State Change Ack messages sent with unknown TLV.
Duplicate TLV Found	The total number of Network Entry MS State Change Ack messages sent with duplicate TLV.

```
■ show asngw-service statistics function-type ms-state-change
```

Field	Description
No Session Found	The total number of Network Entry MS State Change Ack messages sent without session information.

show asngw-service statistics verbose

Table 161. show asngw-service statistics verbose Command Output Descriptions

Field	Description
Message Groups	
R6 MS Pre-Attachment Request messages	Groups the statistics of the MS pre-attachment request messages on R6 interface.
R6 MS Pre-Attachment Response messages	Groups the statistics of the MS pre-attachment response messages on R6 interface.
R6 MS Pre-Attachment Ack messages	Groups the statistics of the MS pre-attachment ACK messages on R6 interface.
R6 Network Exit MS State Change Request messages	Groups the statistics of the MS state change request messages on network exit R6 interface.
R4 Network Exit MS State Change Request messages	Groups the statistics of the MS state change request messages on network exit R4 interface.
R6 Network Exit MS State Change Response messages	Groups the statistics of the MS state change response messages on network exit R6 interface.
R4 Network Exit MS State Change Response messages	Groups the statistics of the MS state change response messages on network exit R4 interface.
R6 Context Request messages	Groups the statistics of the context request messages on R6 interface.
R4 Context Request messages	Groups the statistics of the context request messages on R4 interface.
R6 Context Report messages	Groups the statistics of the context report messages on R6 interface.
R4 Context Report messages	Groups the statistics of the context report messages on R4 interface.
R6 Context Ack messages	Groups the statistics of the context ACK messages on R6 interface.
R4 Context Ack messages	Groups the statistics of the context ACK messages on R4 interface.
R6 Authentication Relay EAP Transfer messages	Groups the statistics of the EAP authentication relay transfer messages on R6 interface.
R4 Authentication Relay EAP Transfer messages	Groups the statistics of the EAP authentication relay transfer messages on R4 interface.
R6 Authentication Relay EAP Start messages	Groups the statistics of the EAP authentication relay start messages on R6 interface.
R4 Authentication Relay EAP Start messages	Groups the statistics of the EAP authentication relay start messages on R4 interface.
R6 MS Attachment Request messages	Groups the statistics of the MS attachment request messages on R6 interface.

Field	Description
R6 MS Attachment Response messages	Groups the statistics of the MS attachment response messages on R6 interface.
R6 MS Attachment Ack messages	Groups the statistics of the MS attachment ACK messages on R6 interface.
R6 Data-Path Pre-Registration Request messages	Groups the statistics of the data path pre-registration request messages on R6 interface.
R4 Data-Path Pre-Registration Request messages	Groups the statistics of the data path pre-registration request messages on R4 interface.
R6 Data-Path Pre-Registration Response messages	Groups the statistics of the data path pre-registration response messages on R6 interface.
R4 Data-Path Pre-Registration Response messages	Groups the statistics of the data path pre-registration response messages on R4 interface.
R6 Data-Path Pre-Registration Ack messages	Groups the statistics of the data path pre-registration ACK messages on R6 interface.
R4 Data-Path Pre-Registration Ack messages	Groups the statistics of the data path pre-registration ACK messages on R4 interface.
R6 Data-Path Registration Request messages	Groups the statistics of the data path registration request messages on R6 interface.
R4 Data-Path Registration Request messages	Groups the statistics of the data path registration request messages on R4 interface.
R6 Data-Path Registration Response messages	Groups the statistics of the data path registration response messages on R6 interface.
R4 Data-Path Registration Response messages	Groups the statistics of the data path registration response messages on R4 interface.
R6 Data-Path Registration Ack messages	Groups the statistics of the data path registration ACK messages on R6 interface.
R4 Data-Path Registration Ack messages	Groups the statistics of the data path registration ACK messages on R4 interface.
R6 Data-Path De-Registration Request messages	Groups the statistics of the data path de-registration request messages on R6 interface.
R4 Data-Path De-Registration Request messages	Groups the statistics of the data path de-registration request messages on R4 interface.
R6 Data-Path De-Registration Response messages	Groups the statistics of the data path de-registration response messages on R6 interface.
R4 Data-Path De-Registration Response messages	Groups the statistics of the data path de-registration response messages on R4 interface.
R6 Data-Path De-Registration Ack messages	Groups the statistics of the data path de-registration ACK messages on R6 interface.
R4 Data-Path De-Registration Ack messages	Groups the statistics of the data path de-registration ACK messages on R4 interface.

Field	Description
R6 Key Change Directive messages	Groups the statistics of the key change directive messages on R6 interface.
R4 Key Change Directive messages	Groups the statistics of the key change directive messages on R4 interface.
R6 Key Change Ack messages	Groups the statistics of the key change ACK messages on R6 interface.
R4 Key Change Ack messages	Groups the statistics of the key change ACK messages on R4 interface.
R6 Key Change Confirm messages	Groups the statistics of the key change confirm messages on R6 interface.
R4 Key Change Confirm messages	Groups the statistics of the key change confirm messages on R4 interface.
R6 Cmac Key Count Update Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count update messages on R6 interface.
R4 Cmac Key Count Update Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count update messages on R4 interface.
R6 Cmac Key Count Ack Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count ACK messages on R6 interface.
R4 Cmac Key Count Ack Msg	Groups the statistics of the Cipher-based Message Authentication Code (CMAC) key count ACK messages on R4 interface.
R6 Handoff Request Msg	Groups the statistics of the hand-off request messages on R6 interface.
R4 Handoff Request Msg	Groups the statistics of the hand-off request messages on R4 interface.
R6 Handoff Response Msg	Groups the statistics of the hand-off response messages on R6 interface.
R4 Handoff Response Msg	Groups the statistics of the hand-off response messages on R4 interface.
R6 Handoff Ack Msg	Groups the statistics of the hand-off ACK messages on R6 interface.
R4 Handoff Ack Msg	Groups the statistics of the hand-off ACK messages on R4 interface.
R6 Handoff Confirm Msg	Groups the statistics of the hand-off confirm messages on R6 interface.
R4 Handoff Confirm Msg	Groups the statistics of the hand-off confirm messages on R4 interface.
R6 Handoff Complete Msg	Groups the statistics of the hand-off complete messages on R6 interface.
R4 Handoff Complete Msg	Groups the statistics of the hand-off complete messages on R4 interface.
R4 IM Entry State Change Req Msg	Groups the statistics of the idle mode entry state change request messages on R4 interface.
R4 IM Entry State Change Rsp Msg	Groups the statistics of the idle mode entry state change response messages on R4 interface.
R4 IM Entry State Change Ack Msg	Groups the statistics of the idle mode entry state change ACK messages on R4 interface.
R4 Anchor PC Indication Msg	Groups the statistics of anchor paging controller (PC) indication messages on R4 interface.
R4 Anchor PC Ack Msg	Groups the statistics of anchor paging controller (PC) ACK messages on R4 interface.

Field	Description
R4 IM Exit State Change Req Msg	Groups the statistics of the idle mode exit state change request messages on R4 interface.
R4 IM Exit State Change Rsp Msg	Groups the statistics of the idle mode exit state change response messages on R4 interface.
R4 Initiate Paging Req Msg	Groups the statistics of the initiated paging request messages on R4 interface.
R4 Initiate Paging Rsp Msg	Groups the statistics of the initiated paging response messages on R4 interface.
R4 Delete MS Entry Req Msg	Groups the statistics of the request messages to delete the MS entry request on R4 interface.
R4 Delete MS Entry Rsp Msg	Groups the statistics of the messages sent in response of delete message for the MS entry request on R4 interface.
R6 Unknown messages	Groups the statistics of the unknown type of request messages on R6 interface.
R4 Unknown messages	Groups the statistics of the unknown type of request messages on R4 interface.
Message Statistics	
Total Sent	The total number of this type of message sent on specific interface.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Retransmissions Sent	The total number of this type of message re-transmitted on specific interface.
Total Received	The total number of this type of message received on specific interface.
Total Accepted	The total number of this type of message accepted on specific interface.
Total Relayed	The total number of this type of message relayed on specific interface.
Total Denied	The total number of this type of message denied on specific interface.
Total Discarded	The total number of this type of message discarded on specific interface.
Badly Formed	The total number of badly formed this type of message on specific interface.
Decode Error	The total number of this type of message on specific interface with decode error.
Unspecified Error	The total number of this type of message on specific interface with unspecified error.
Missing Mandatory TLV	The total number of this type of message on specific interface with missing mandatory TLVs.
TLV Value Invalid	The total number of this type of message on specific interface with invalid TLV value.
Unknown TLV	The total number of this type of message on specific interface with unknown TLVs.
Duplicate TLV Found	The total number of this type of message on specific interface with duplicate TLVs.
No session Found	The total number of this type of message on specific interface without any session information.
Transaction Id. Error	The total number of this type of message on specific interface. with transaction id error.
Key Change Success	The total number of successful Key Change Confirmation messages.
Key Change Failure	The total number of Key Change Confirmation messages failed.

Field	Description
Out Of Order Packet	The total number of authentication relay EAP transfer/start messages on R6 interface with out-of-order packets.
MS Initiated Re-Auth	The total number of authentication relay EAP start messages on specific interface with MS initiated reauthorization.
BS Initiated Re-Auth	The total number of authentication relay EAP start messages on specific interface with BS initiated reauthorization.
Data messages	
GRE R6 Receive	The total number of data message received with through GRE tunnel on R6 interface.
GRE R4 Receive	The total number of data message received through GRE tunnel on R4 interface.
Packets Received	The total number of data packets received/sent through GRE tunnel on R4/R6 interface.
Bytes Received	The total number of data bytes received/sent through GRE tunnel on R4/R6 interface.
Protocol Type Error	The total number of data message received/sent with protocol type error through GRE tunnel on R4/R6 interface.
GRE Key Absent	The total number of data message received/sent without GRE key through GRE tunnel on R4/R6 interface.
GRE Checksum Error	The total number of data message received/sent with checksum error through GRE tunnel on R4/R6 interface.
Invalid Packet Length	The total number of data message received/sent with invalid packet length through GRE tunnel on R4/R6 interface.
No Session found	The total number of data message received/sent without any session information through GRE tunnel on R4/R6 interface.
Unspecified Error	The total number of data message received/sent with unknown error through GRE tunnel on R4/R6 interface.
GRE R6 Send	The total number of data message sent through GRE tunnel on R6 interface.
GRE R4 Send	The total number of data message sent through GRE tunnel on R4 interface.
Packets Sent	The total number of data packets sent through GRE tunnel on R4/R6 interface.
Send Error	The total number of data message sent with error through GRE tunnel on R4/R6 interface.
Bytes Sent	The total number of data bytes sent through GRE tunnel on R4/R6 interface.

Chapter 74

show asnpc-service

This chapter includes the `show asnpc-service` command output tables.

show asnpc-service all

Table 162. show asnpc-service all Command Output Descriptions

Field	Description
Service name	The ASN GW service name.
Context	The context in which the service is configured.
Anchor PC ID	The anchor paging controller identifier.
Bind	The bind status.
Max Subscribers	The maximum number of subscribers.
IP address	IP address of ASN GW server where this service is located.
UDP Port	The UDP port number.
Service Status	Status of this service.
Maximum number of retransmissions	The maximum number of retransmissions.
Maximum number of paging-announce retransmissions	The maximum number of paging-announce retransmissions.
Retransmission timeout	The retransmission timeout duration.
Setup timeout	The session setup timeout duration.
Active-relay timeout	Indicates the timeout duration for active relay of R4 or R6 messages.
Paging-announce timeout	Indicates the paging announce timeout duration in seconds.
Paging-announce retransmission timeout	Indicates the paging announce retransmission timeout duration in seconds.
Policy transaction-id-validation	Possible values are: - ALLOW: Enforce tid validation procedure as per NWG specification, section 3.1. - DISALLOW: Do not enforce tid validation procedure as per NWG specification, section 3.1.
Policy zero-function-type	Possible values are: - ALLOW: If configured, function type is not considered for transaction id generation/validation. - DISALLOW: If configured, function type is considered for transaction id generation/validation.
Transaction Id. Seed	If configured, initial value of tid is set to this configured value, otherwise, initial value of tid is set to a random number.
Peer ASNGW address	The list of ASN GW IP addresses with which the PCLR is permitted to interact.
Number of Paging Groups configured	The total number of paging groups configured for this service.

Field	Description
Paging Group	The paging group ID associated with this service.
Paging Offset	The offsets configured for the Paging Group.
Number of MSIDs	The current total number of MNs assigned/using the offset.

show asnpc-service session all

Table 163.show asnpc-service session all Command Output Descriptions

Field	Description
CALLID	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
BS/PA Address	IP address of the base-station or paging agent.
Session Type	Indicates the type of ASNPC session. Possible type of sessions are: • Anchor • Non-anchor
Total ASNPC Sessions	The total number of ASNPC sessions on chassis including all modes.

show asnpc-service session full

Table 164. show asnpc-service session all Command Output Descriptions

Field	Description
Username	The subscriber's user name.
Callid	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
ASNPC Service Address	IP address of system where ASNPC service is running.
BS/PA Address	IP address of the base-station or paging agent.
BS ID	The identifier of base station. Generally it is MAC address of the BS.
Authenticator Address	IP address of the authenticator ASN GW.
DPF/ASNGW Address	IP address of the system where data path function/ASN GW service is running.
Idle-mode timeout	Indicates the total configured timeout duration in seconds for an MS to enter the idle mode from active mode.
Remaining Idle Mode Timeout	Indicates the remaining timeout duration in seconds for an MS to enter the idle mode from active mode.
Paging Information	
Paging Cycle	Indicates the number of paging cycles happened in this ASNPC service session.
Paging Offset	Indicates the paging offset for paging announce.
Paging Group ID	Indicates the paging group identifier which contains the group of paging agents bounded with this paging controller session.
Paging Interval	Interval time in seconds between two paging announces.
MS Information	
Idle Mode Authorization Indication	Indicates the idle mode authorization status.
SA Descriptor Information	Indicates the Security Association description information. SA descriptor is a compound attribute whose sub-attributes describe the properties of a Security Association (SA). These properties include the SA ID, the SA type, the SA service type, and the cryptographic suite employed within the SA.
SA ID	Indicates the identifier for the security association.
SA Type	Indicates the types of security association. Possible values are:

Field	Description
Cryptographic Suite	Indicates the cryptographic suite employed within the security association. Possible values are: • 0: Primary SA • 1: Static SA • 3: Dynamic SA • 4: Group SA • 5: MBS SA
SA Service Type	Indicates the service types of the corresponding SA type. Possible values are: • 0: Unicast service • 1: Group multicast service • 2: MBS service Note that this shall be defined only when SA type is Static SA or Dynamic SA.
SA Index	Indicates the index of security association.
Older/Newer TEK Parameters	Indicates the older or newer Traffic Encryption Key (TEK) parameters involved.
TEK TLV (in hex)	Indicates the TEK total length value in hexadecimal.
TEK Sequence Number	Indicates the TEK sequence number.
TEK Lifetime	Indicates the TEK lifetime in seconds.
PN Counter	Indicates the packet number counter in downlink direction that are used for encryption and decryption by the Base Station.
RxPN Counter	Indicates the packet number counter in uplink direction that are used for encryption and decryption by the Base Station.
Total ASNPC Sessions	The total number of ASNPC sessions on chassis including all modes.

show asnpc-service session counters verbose

Table 165. show asnpc-service session counters verbose Command Output Descriptions

Field	Description
Username	The subscriber's user name.
Callid	The subscriber's call identification number.
MSID	The subscriber's Mobile Station Identification number.
Message Groups	
R6 Idle Mode Entry MS State Change Request Msg	Groups the statistics of the Idle Mode Entry MS State Change Request messages on R6 interface.
R6 Idle Mode Entry MS State Change Response Msg	Groups the statistics of the Idle Mode Entry MS State Change Response messages on R6 interface.
R6 Idle Mode Entry MS State Change Ack Msg	Groups the statistics of the Idle Mode Entry MS State Change Ack messages on R6 interface.
R6 Idle Mode Exit MS State Change Request Msg	Groups the statistics of the Idle Mode Exit MS State Change Request messages on R6 interface.
R6 Idle Mode Exit MS State Change Response Msg	Groups the statistics of the Idle Mode Exit MS State Change Response messages on R6 interface.
R6 Location Update Request Msg	Groups the statistics of the Location Update Request messages on R6 interface.
R6 Location Update Response Msg	Groups the statistics of the Location Update Response messages on R6 interface.
R6 Location Update Confirm Msg	Groups the statistics of the Location Update Confirm messages on R6 interface.
R6 Paging Announce Msg	Groups the statistics of the Paging Announce messages on R6 interface.
R4 Idle Mode Entry MS State Change Request Msg	Groups the statistics of the Idle Mode Entry MS State Change Request messages on R4 interface.
R4 Idle Mode Entry MS State Change Response Msg	Groups the statistics of the Idle Mode Entry MS State Change Response messages on R4 interface.
R4 Idle Mode Entry MS State Change Ack Msg	Groups the statistics of the Idle Mode Entry MS State Change Ack messages on R4 interface.
R4 Idle Mode Exit MS State Change Request Msg	Groups the statistics of the Idle Mode Exit MS State Change Request messages on R4 interface.
R4 Idle Mode Exit MS State Change Response Msg	Groups the statistics of the Idle Mode Exit MS State Change Response messages on R4 interface.
R4 Network Exit MS State Change Request Msg	Groups the statistics of the Network Exit MS State Change Request messages on R4 interface.

Field	Description
R4 Network Exit MS State Change Response Msg	Groups the statistics of the Network Exit MS State Change Response messages on R4 interface.
R4 Delete MS Entry Request Msg	Groups the statistics of the Delete MS Entry Request messages on R4 interface.
R4 Delete MS Entry Response Msg	Groups the statistics of the Delete MS Entry Response messages on R4 interface.
R4 Initiate Paging Request Msg	Groups the statistics of the Initiate Paging Request messages on R4 interface.
R4 Initiate Paging Response Msg	Groups the statistics of the Initiate Paging Response messages on R4 interface.
R4 Anchor PC Ind Msg	Groups the statistics of the Anchor Paging Controller Indicator messages on R4 interface.
R4 Anchor PC Ack Msg	Groups the statistics of the Anchor Paging Controller Ack messages on R4 interface.
R4 Context Request Msg	Groups the statistics of the Context Request messages on R4 interface.
R4 Context Report Msg	Groups the statistics of the Context Report messages on R4 interface.
R6/R4 Unknown Messages	Groups the statistics of the Unknown type of messages on R6 and/or R4 interface.
Message Statistics	
Total Sent	The total number of this type of message sent on specific interface.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Retransmissions Sent	The total number of this type of message re-transmitted on specific interface.
Total Received	The total number of this type of message received on specific interface.
Total Accepted	The total number of this type of message accepted on specific interface.
Total Relayed	The total number of this type of message relayed on specific interface.
Total Denied	The total number of this type of message denied on specific interface.
Total Discarded	The total number of this type of message discarded on specific interface.
Badly Formed	The total number of badly formed this type of message on specific interface.
Decode Error	The total number of this type of message on specific interface with decode error.
Unspecified Error	The total number of this type of message on specific interface with unspecified error.
Paging Config Error	The total number of this type of errors messages on specified interface occurred. This error occurs when paging node id (BS id) is not configured in configured paging groups.
Missing Mandatory TLV	The total number of this type of message on specific interface with missing mandatory TLVs.
TLV Value Invalid	The total number of this type of message on specific interface with invalid TLV value.
Unknown TLV	The total number of this type of message on specific interface with unknown TLVs.
Duplicate TLV Found	The total number of this type of message on specific interface with duplicate TLVs.
No session Found	The total number of this type of message on specific interface without any session information.

Field	Description
Transaction Id. Error	The total number of this type of message on specific interface. with transaction id error.
Data messages	
GRE R6 Receive	The total number of data message received with through GRE tunnel on R6 interface.
GRE R4 Receive	The total number of data message received through GRE tunnel on R4 interface.
Packets Received	The total number of data packets received/sent through GRE tunnel on R4/R6 interface.
Bytes Received	The total number of data bytes received/sent through GRE tunnel on R4/R6 interface.
Protocol Type Error	The total number of data message received/sent with protocol type error through GRE tunnel on R4/R6 interface.
GRE Key Absent	The total number of data message received/sent without GRE key through GRE tunnel on R4/R6 interface.
GRE Checksum Error	The total number of data message received/sent with checksum error through GRE tunnel on R4/R6 interface.
Invalid Packet Length	The total number of data message received/sent with invalid packet length through GRE tunnel on R4/R6 interface.
No Session found	The total number of data message received/sent without any session information through GRE tunnel on R4/R6 interface.
Unspecified Error	The total number of data message received/sent with unknown error through GRE tunnel on R4/R6 interface.
GRE R6 Send	The total number of data message sent through GRE tunnel on R6 interface.
GRE R4 Send	The total number of data message sent through GRE tunnel on R4 interface.
Packets Sent	The total number of data packets sent through GRE tunnel on R4/R6 interface.
Send Error	The total number of data message sent with error through GRE tunnel on R4/R6 interface.
Bytes Sent	The total number of data bytes sent through GRE tunnel on R4/R6 interface.

show asnpc-service statistics verbose

Table 166. show asnpc-service statistics verbose Command Output Descriptions

Field	Description
Message Groups	
R6 Idle Mode Entry MS State Change Request Msg	Groups the statistics of the Idle Mode Entry MS State Change Request messages on R6 interface.
R6 Idle Mode Entry MS State Change Response Msg	Groups the statistics of the Idle Mode Entry MS State Change Response messages on R6 interface.
R6 Idle Mode Entry MS State Change Ack Msg	Groups the statistics of the Idle Mode Entry MS State Change Ack messages on R6 interface.
R6 Idle Mode Exit MS State Change Request Msg	Groups the statistics of the Idle Mode Exit MS State Change Request messages on R6 interface.
R6 Idle Mode Exit MS State Change Response Msg	Groups the statistics of the Idle Mode Exit MS State Change Response messages on R6 interface.
R6 Location Update Request Msg	Groups the statistics of the Location Update Request messages on R6 interface.
R6 Location Update Response Msg	Groups the statistics of the Location Update Response messages on R6 interface.
R6 Location Update Confirm Msg	Groups the statistics of the Location Update Confirm messages on R6 interface.
R6 Paging Announce Msg	Groups the statistics of the Paging Announce messages on R6 interface.
R4 Idle Mode Entry MS State Change Request Msg	Groups the statistics of the Idle Mode Entry MS State Change Request messages on R4 interface.
R4 Idle Mode Entry MS State Change Response Msg	Groups the statistics of the Idle Mode Entry MS State Change Response messages on R4 interface.
R4 Idle Mode Entry MS State Change Ack Msg	Groups the statistics of the Idle Mode Entry MS State Change Ack messages on R4 interface.
R4 Idle Mode Exit MS State Change Request Msg	Groups the statistics of the Idle Mode Exit MS State Change Request messages on R4 interface.
R4 Idle Mode Exit MS State Change Response Msg	Groups the statistics of the Idle Mode Exit MS State Change Response messages on R4 interface.
R4 Initiate Paging Request Msg	Groups the statistics of the Initiate Paging Request messages on R4 interface.
R4 Initiate Paging Response Msg	Groups the statistics of the Initiate Paging Response messages on R4 interface.
R4 Location Update Request Msg	Groups the statistics of the Location Update Request messages on R4 interface.

Field	Description
R4 Location Update Response Msg	Groups the statistics of the Location Update Response messages on R4 interface.
R4 Location Update Confirm Msg	Groups the statistics of the Location Update Confirm messages on R4 interface.
R4 Network Exit MS State Change Request Msg	Groups the statistics of the Network Exit MS State Change Request messages on R4 interface.
R4 Network Exit MS State Change Response Msg	Groups the statistics of the Network Exit MS State Change Response messages on R4 interface.
R4 Delete MS Entry Request Msg	Groups the statistics of the Delete MS Entry Request messages on R4 interface.
R4 Delete MS Entry Response Msg	Groups the statistics of the Delete MS Entry Response messages on R4 interface.
R4 Anchor PC Ind Msg	Groups the statistics of the Anchor Paging Controller Indicator messages on R4 interface.
R4 Anchor PC Ack Msg	Groups the statistics of the Anchor Paging Controller Ack messages on R4 interface.
R4 PC Relocation Ind Msg	Groups the statistics of the PC Relocation Ind messages on the R4 interface.
R4 PC Relocation Ack Msg	Groups the statistics of the PC Relocation Ack messages on the R4 interface.
R4 Context Request Msg	Groups the statistics of the Context Request messages on R4 interface.
R4 Context Report Msg	Groups the statistics of the Context Report messages on R4 interface.
R4 CMAC Key Count Update Msg	Groups the statistics of the CMAC Key Count Update messages on the R4 interface.
R4 CMAC Key Count Ack Msg	Groups the statistics of the CMAC Key Count Ack messages on the R4 interface.
R6/R4 Unknown Messages	Groups the statistics of the Unknown type of messages on R6 and/or R4 interface.
Message Statistics	
Total Sent	The total number of this type of message sent on specific interface.
Total Send Failures	The total number of failures occurred during transaction id generation and message not sent for specific interface. This counter is used to count the error while sending the R6/R4 packets.
Retransmissions Sent	The total number of this type of message re-transmitted on specific interface.
Total Received	The total number of this type of message received on specific interface.
Total Accepted	The total number of this type of message accepted on specific interface.
Total Relayed	The total number of this type of message relayed on specific interface.
Total Denied	The total number of this type of message denied on specific interface.
Total Discarded	The total number of this type of message discarded on specific interface.
Badly Formed	The total number of badly formed this type of message on specific interface.
Decode Error	The total number of this type of message on specific interface with decode error.
Unspecified Error	The total number of this type of message on specific interface with unspecified error.

Field	Description
Missing Mandatory TLV	The total number of this type of message on specific interface with missing mandatory TLVs.
TLV Value Invalid	The total number of this type of message on specific interface with invalid TLV value.
Unknown TLV	The total number of this type of message on specific interface with unknown TLVs.
Duplicate TLV Found	The total number of this type of message on specific interface with duplicate TLVs.
No session Found	The total number of this type of message on specific interface without any session information.
Transaction Id. Error	The total number of this type of message on specific interface. with transaction id error.

Chapter 75

show bcmcs

This chapter includes the **show bcmcs** command output tables.

show bcmcs counters all

Table 167. show bcmcs counters all Command Output Descriptions

Field	Description
Username	BCMCS group username for this output.
Callid	Call ID for this output.
Flow-id	Flow ID for this output.
BCMCS Service Request/Reply	
Renew SRQ Accepted	The total number of service request renewals accepted.
Discarded	The total number of service request renewals discarded.
Response Send Error	The total number of service replies for which errors were experienced during transmission.
BCMCS Registration Request/Reply	
Renew RRQ Accepted	The total number of registration request renewals accepted.
Discarded	The total number of registration request renewals discarded.
Response Send Error	The total number of registration replies for which errors were experienced during transmission.
BCMCS Registration Update/Ack	
Initial Update Transmitted	The total number of registration updates that have been transmitted.
Update Retransmitted	The total number of registration updates that have been re-transmitted.
Denied	The total number of registration updates that have been denied by the PCF.
Not Acknowledged	The total number of registration updates and/or acknowledgements that have not been acknowledged by the PCF.
Reg Ack Received	The total number of registration acknowledgements that have been received.
Reg Ack Discarded	The total number of registration acknowledgements that have been discarded.
Update Send Error	The total number of registration updates for which errors were experienced during transmission.
BCMCS Registration Update Send Reason	
Lifetime Expiry	The total number of registration updates that were sent due to the expiration of a lifetime timer during a subscriber session.
Upper Layer Initiated	The total number of registration updates that were initiated by upper processing layers.
Other Reasons	The total number of registration updates that were sent due to reasons other than those listed here.
Session Manager Exited	The total number of registration updates that were sent due to the termination of Session Manager tasks. NOTE: If any data is reported for this field, there may be an issue with either the software or hardware. If you continue to experience problems, refer to the System Administration and Administration Reference for information on troubleshooting the problem.

Field	Description
BCMCS Registration Update Denied	
Reason Unspecified	The total number of denied registration updates that were sent with a reply code of 80H (Registration Denied - reason unspecified).
Admin Prohibited	The total number of denied registration updates that were sent with a reply code of 81H (Registration Denied - administratively prohibited).
BSN Failed Authentication	The total number of denied registration updates due to authentication failure by the mobile node.
Identification Mismatch	The total number of denied registration updates that were sent with a reply code of 85H (Registration Denied - identification mismatch).
Poorly Formed Update	The total number of denied registration updates that were sent with a reply code of 86H (Registration Denied - poorly formed request).
GRE Send	
Total Packets Sent	Indicates the total number of Generic Routing Encapsulation (GRE) packets transmitted.
Total Bytes Sent	Indicates the total number of Generic Routing Encapsulation (GRE) bytes transmitted.
Total BCMCS Sessions matching specified criteria	Total number of sessions matching specified criteria.

show bcmcs statistics

Table 168. show bcmcs statistics Command Output Descriptions

Field	Description
Session Stats	
Total Sessions Current	Indicates the total number of sessions that are in progress. These could be either active, dormant, being set up, or being disconnected.
Current Flow-id session	Indicates the number of flow-id sessions in progress. These could be active, dormant, being set up or being disconnected.
Current Pgm-Id Session	Indicates the number of program-id sessions in progress. These could be active, dormant, being set up or being disconnected.
Total Setup	Indicates the total number of sessions that have been successfully set up since system started.
Total Released	Indicates the total number of sessions that have successfully been disconnected.
Total Setup Flow-Id	Indicates the total number of flow-id sessions that have been successfully set up since the system was started.
Total Setup Program-Id	Indicates the total number of program-id sessions that have been successfully set up since the system was started.
Session Releases	
De-registered	Indicates the total number of sessions that were disconnected through a normal de-registration process.
Lifetime Expiry	Indicates the total number of sessions that were disconnected due to the expiration of their lifetime timer.
PPP Layer Command	Indicates the number of sessions disconnected due to PPP initiating a tear-down.
PCF-Monitor Fail	The total number of sessions disconnected because the PCF monitor function detected that the PCF was down.
GRE Key Mismatch	The total number of sessions disconnected because the GRE key changed for a session.
Other Reasons	Indicates the number of sessions disconnected due to reasons other than those listed here.
BCMCS Service Request/Response	
Total SRQ/Renew/Dereg RX	The total number of service requests, renewals, and de-registrations received.
Total Accept	The total number of service requests that have been received and accepted.
Total Denied	Total number of service requests that have been received and denied.
Total Discard	Total number of service requests that have been received and discarded.
Init SRQ RX	The total number of initial setup or start service requests that have been received.
Init SRQ Accept	The total number of initial setup or start service requests that have been received and accepted.

Field	Description
Init SRQ Denied	The total number of initial setup or start service requests that have been received and denied.
Init SRQ Discard	The total number of initial setup or start service requests that have been received and discarded.
Renew SRQ RX	The total number of service request renewals received.
Renew SRQ Accept	The total number of service request renewals received and accepted.
Renew SRQ Denied	The total number of service request renewals received and denied.
Renew SRQ Discard	The total number of service request renewals received discarded.
Dereg SRQ RX	The total number of de-registration requests that have been received.
Dereg SRQ Accept	The total number of de-registration requests that have been received and accepted.
Dereg SRQ Denied	The total number of de-registration requests that have been received and denied.
Dereg SRQ Discard	The total number of de-registration requests that have been received and discarded.
Response Send Error	Indicates the total number of registration replies for which errors were experienced during transmission.
BCMCS Service Request Denied	
Requests Accepted	Indicates the total number of service requests that were denied based on the number of requests accepted.
Unspecified Reason	Indicates the total number of service requests that were denied for unspecified reasons.
PCF Failed Auth	Indicates the total number of service requests that were denied due to mobile node authentication failure.
Identification Mismatch	Indicates the total number of service requests that were denied due to an identification mismatch.
Unknown BSN	Indicates the total number of service requests that were denied due to an unknown BSN address.
BCMCS SRQ Denied - Insufficient Resource Reasons	
No Session Manager	Indicates the total number of service requests that were denied due to the lack of available Session Manager tasks. This may occur when the system is booting up in the event that a Session Manager task terminated unexpectedly.
No Memory	Indicates the total number of service requests that were denied due to insufficient memory.
Session Managers Retried	Indicates that the system unsuccessfully attempted to try multiple Session Manager tasks to establish a session.
Input-Q Exceeded	Indicates that the queue in which incoming calls are kept prior to being processed exceeded its capacity.
BCMCS SRQ Denied - Poorly Formed Request Reasons	
Session Already Dormant	The number of SRQs that had Active Stop for a session that was already dormant.
Already Active	The number of SRQs that had Active Start for a session that was already active.
Other Reasons	The number of SRQs denied due to other reasons for a badly formed SRQ.
BCMCS SRQ Denied - Overload/Congestion Control	
Admin Prohibited (reject)	SRQs denied due to congestion control mechanism.

Field	Description
Unknown BSN (redirect)	SRQs denied due to congestion control mechanism.
BCMCS Registration Request/Reply	
Total RRQ/Renew/Dereg RX	The total number of registration requests, renewals, and de-registrations received.
Total Accept	The total number of registration requests that have been accepted.
Total Denied	The total number of registration requests that have been rejected.
Total Discard	The total number of registration requests that have been discarded.
Init RRQ RX	The total number of initial registration requests that have been received.
Init RRQ Accept	The total number of initial registration requests received and accepted.
Init RRQ Denied	The total number of initial registration requests received and rejected.
Init RRQ Discard	The total number of initial registration requests that have been received and discarded.
Renew RRQ RX	The total number of registration request renewals received.
Renew RRQ Accept	The total number of registration request renewals received and accepted.
Renew Actv Start Accept	The total number of RRQ renewals with an Active Start record received and accepted.
Renew Actv Stop Accept	The total number of RRQ renewals with an Active Stop record received and accepted.
Renew RRQ Denied	The total number of registration request renewals received and rejected.
Renew RRQ Discard	The total number of registration request renewals received and discarded.
Dereg RRQ RX	The total number of de-registration requests that have been received.
Dereg RRQ Accept	The total number of de-registration requests received and accepted.
Dereg Active Stop Accept	The total number of de-registration requests with an active stop that were accepted.
Dereg RRQ Denied	The total number of de-registration requests received and rejected.
Dereg RRQ Discard	The total number of de-registration requests received and discarded.
Reply Send Error	Indicates the total number of registration replies for which errors were experienced during transmission.
BCMCS Registration Request Denied	
Unspecified Reason	Indicates the total number of registration requests that were denied using reply code of 80H (Registration Denied - reason unspecified).
Admin Prohibited	Indicates the total number of registration requests that were denied using reply code of 81H (Registration Denied - administratively prohibited).
Insufficient Resources	Indicates the total number of registration requests that were denied using reply code of 82H (Registration Denied - insufficient resources).

Field	Description
PCF Failed Auth	Indicates the total number of registration requests that were denied using reply code of 83H (Registration Denied - mobile node failed authentication).
Identification Mismatch	Indicates the total number of registration requests that were denied using reply code of 85H (Registration Denied - identification mismatch).
Poorly Formed Request	Indicates the total number of registration requests that were denied using reply code of 86H (Registration Denied - poorly formed request).
Unknown BSN Address	Indicates the total number of registration requests that were denied due to an unknown BSN address.
Reverse Tunnel Unavail	Indicates the total number of registration requests that were denied using reply code of 89H (Registration Denied - requested reverse tunnel unavailable).
Reverse Tunnel Required	Indicates the total number of registration requests that were denied using reply code of 8AH (Registration Denied - reverse tunnel is mandatory and "T"-bit not set).
Unrecognized Vendor Id	Indicates the total number of registration requests that were denied using reply code of 8DH (Registration Denied - unsupported vendor ID or unable to interpret data in the CVSE).
Session Already Closed	Renew and RRQ denied due to the session not present in the PDSN Dereg. Error code 0x8e.
BCMCS RRQ Denied - Insufficient Resource Reasons	
No Session Manager	Indicates the total number of registration requests that were denied due to the lack of available Session Manager tasks. This may occur when the system is booting up in the event that a Session Manager task terminated unexpectedly.
No Memory	Indicates the total number of registration requests that were denied due to insufficient memory.
Session Managers Retried	Indicates that the system unsuccessfully attempted to try multiple Session Manager tasks to establish a session.
Input-Q Exceeded	Indicates that the queue in which incoming calls are kept prior to being processed exceeded its capacity.
BCMCS RRQ Denied - Poorly Formed Request Reasons	
Session Already Dormant	The number of RRQs that had Active Stop for a session that was already dormant.
Already Active	The number of RRQs that had Active Start for a session that was already active.
Other Reasons	The number of RRQs denied due to other reasons for a badly formed RRQ.
BCMCS RRQ Denied - Overload/Congestion Control	
Admin Prohibited (reject)	RRQs denied with error code 0x81h due to congestion control mechanism.
Unknown BSN (redirect)	RRQs denied with error code 0x88 due to congestion control mechanism.
BCMCS Registration Update/Ack	
Reg Update Transmitted	Indicates the total number of registration updates that were transmitted.
Accepted	Indicates the total number of registration updates that were accepted by the PCF.

Field	Description
Denied	Indicates the total number of registration updates that were denied.
Not Acknowledged	Indicates the total number of registration updates that were not acknowledged.
Initial Update TX	Indicates the total number of initial registration updates that were transmitted.
Update Retransmitted	Indicates the total number of registration updates that were re-transmitted.
Reg Ack Received	Indicates the total number of registration acknowledgements that were received.
Reg Ack Discarded	Indicates the total number of registration acknowledgements that were discarded.
Update Send Error	Indicates the total number of registration updates for which errors were experienced during transmission.
BCMCS Registration Update Send Reason	
Lifetime Expiry	Indicates the total number of registration updates that were sent due to the expiration of a lifetime timer during a subscriber session.
Other Reasons	Indicates the total number of registration updates that were sent due to reasons other than those listed here.
Upper Layer Initiated	Indicates the total number of registration updates that were initiated by upper processing layers.
Session Manager Exited	Indicates the number of registration updates that were sent due to the termination of a Session Manager task.
BCMCS Registration Update Denied	
Reason Unspecified	Indicates the total number of denied registration updates that were sent with a reply code of 80H (Registration Denied - reason unspecified).
Admin Prohibited	Indicates the total number of denied registration updates that were sent with a reply code of 81H (Registration Denied - administratively prohibited).
BSN Failed Auth	Indicates the total number of denied registration updates that were sent due to failed authentication by the mobile node.
Identification Mismatch	Indicates the total number of denied registration updates that were sent with a reply code of 85H (Registration Denied - identification mismatch).
Poorly Formed Updated	Indicates the total number of denied registration updates that were sent with a reply code of 86H (Registration Denied - poorly formed request).
BCMCS Registration Ack Discard Reasons	
Session Absent	Indicates the total number of registration acknowledgements that were discarded due to the session having been already ended because the acknowledgement was late.
No Memory	Indicates the total number of registration acknowledgements that were discarded due to insufficient memory.
Malformed	Indicates the total number of registration acknowledgements that were discarded due to being poorly formed.
Auth Failure	Indicates the total number of registration acknowledgements that were discarded due to the mobile node failing authentication.
Internal Bounce Error	Indicates that an internal communication message between an A11 Manager task and a Session Manager task bounced (was not successfully sent).

Field	Description
Input-Q Exceeded	Indicates the number of times that the queue in which incoming calls are kept prior to being processed exceeded its capacity.
Mismatched Id	Indicates the total number of discarded registration acknowledgements due to reply code 85H (Registration Denied - identification mismatch).
Invalid Packet Length	Indicates the total number of registration acknowledgements that were discarded due to having an invalid packet length.
Misc Reasons	Indicates the number of registration acknowledgements that were discarded due to reasons other than those listed here.
GRE Send	
Total Packets Sent	Indicates the total number of Generic Routing Encapsulation (GRE) packets transmitted.
Total Bytes Sent	Indicates the total number of Generic Routing Encapsulation (GRE) bytes transmitted.

Chapter 76

show bssap

This chapter includes the **show bssap** command output tables.

show bssap+ statistics

Table 169. show bssap+ statistics Command Output Descriptions

Field	Description
Bssap+ Statistics	Base station system application part plus related statistics.
Number of Subscribers in Gs-Associated State	Total number of subscriber in Gs associated state or using Gs interface for connectivity between SGSN and VLR.
Number of Associated VLRs	Total number of VLRs associated with this BSSAP+ application.
Alert Req Rcvd	Total number of alert request messages received by BSSAP+ application from VLR.
Alert Ack Sent	Total number of acknowledge messages sent by BSSAP+ application in response to alert requests messages.
Alert Rej Sent	Total number of messages sent by BSSAP+ application to reject the alert requests.
Location Upd Req Sent	Total number of location update request messages sent by BSSAP+ application.
Location Upd Acc Rcvd	Total number of location update accept messages sent by BSSAP+ application from VLR.
Location Upd Rej Rcvd	Total number of messages sent by BSSAP+ application to reject the location update requests from VLR.
GPRS Detach Ind Sent	Total number of GPRS detach indication messages sent by BSSAP+ application.
GPRS Detach Ack Rcvd	Total number of acknowledge messages received by BSSAP+ application in response to GPRS detach indication messages sent to VLR.
IMSI Detach Ind Sent	Total number of IMSI detach indication messages sent by BSSAP+ application to VLR.
IMSI Detach Ack Rcvd	Total number of acknowledge messages received by BSSAP+ application in response to IMSI detach indication messages sent to VLR.
Mobile Status Rcvd	Total number of mobile status messages received by BSSAP+ application from VLR.
Mobile Status Sent	Total number of mobile status messages sent by BSSAP+ application to VLR.
Paging Req Rcvd	Total number of paging request messages received by BSSAP+ application from VLR.
Paging Rej Sent	Total number of messages sent by BSSAP+ application to reject the received paging request messages from VLR.
MS Unreachable Sent	Total number of messages sent by BSSAP+ application to indicate that mobile is unreachable to VLR.
TMSI Reloc Comp Sent	Total number of messages sent by BSSAP+ application with TMSI relocation components to VLR.
MS Info Req Rcvd	Total number of MS information request messages received by BSSAP+ application from VLR.
MS Info Rsp Sent	Total number of response messages sent by BSSAP+ application in response to MS information request messages from VLR.

Field	Description
MM Info Req Rcvd	Total number of mobility management (MM) information request messages received by BSSAP+ application from VLR.
MS Activity Ind Sent	Total number of MS activity indication messages sent by BSSAP+ application to VLR.
Reset Ind Rcvd	Total number of reset indicator messages received by BSSAP+ application from VLR.
Reset Ack Sent	Total number of acknowledge messages sent by BSSAP+ application in response to reset indicator message received from VLR.
Reset Ind Sent	Total number of reset indicator messages sent by BSSAP+ application to VLR.
Reset Ack Rcvd	Total number of acknowledge messages received by BSSAP+ application in response to reset indicator message sent to VLR.
Downlink Tnnl Req Rcvd	Total number of downlink tunnel request messages received by BSSAP+ application from VLR.
Uplink Tnnl Req Sent	Total number of uplink tunnel request messages sent by BSSAP+ application to VLR.

Chapter 77

show bulkstats data

Table 170. show bulkstats data Command Output Descriptions

Field	Description
Bulk Statistics Server Configuration:	
Server State	Indicates the server state—enabled/disabled.
File Limit	Indicates the file size limit in KBs.
Sample Interval	Indicates the sampling interval.
Transfer Interval	Indicates the transfer interval.
Receiver Mode	Indicates the receiver mode.
Local File Storage	Indicates the local file storage.
Historical Data Collection	Indicates the Historical Data Collection state—enabled/disabled.
Bulk Statistics Server Statistics:	
Records awaiting transmission	Indicates the number of records awaiting transmission.
Bytes awaiting transmission	Indicates the number of bytes awaiting transmissions.
Total records collected	Indicates the total number of records collected.
Total bytes collected	Indicates the total number of bytes collected.
Total records transmitted	Indicates the total number of records transmitted.
Total bytes transmitted	Indicates the total number of bytes transmitted.
Total records discarded	Indicates the total number of records discarded.
Total bytes discarded	Indicates the total number of bytes discarded.
Last collection time required	Indicates the last collection time required.
Last transfer time required	Indicates the last transfer time required.
No successful data transfers	Indicates successful data transfers.
No attempted data transfers	Indicates attempted data transfers.
Fine n	
Remote File Format	The remote file format—for example, %date%-%time%
File Header	The file's header.

Field	Description
File Footer	The file's footer.
No bulkstats receivers	Indicates the total number of Bulk Statistics collection servers configured.
File Statistics:	
Records awaiting transmission	Indicates the number of records awaiting transmission.
Bytes awaiting transmission	Indicates the number of bytes awaiting transmissions.
Total records collected	Indicates the total number of records collected.
Total bytes collected	Indicates the total number of bytes collected.
Total records transmitted	Indicates the total number of records transmitted.
Total bytes transmitted	Indicates the total number of bytes transmitted.
Total records discarded	Indicates the total number of records discarded.
Total bytes discarded	Indicates the total number of bytes discarded.
Last transfer time required	Indicates the last transfer time required.
No successful data transfers	Indicates successful data transfers.
No attempted data transfers	Indicates attempted data transfers.

Chapter 78

show cae-group server name

Table 171. show cae-group server name Command Output Descriptions

Field	Description
Server	The name of the CAE.
IP	The IPv4 address of the CAE.
State	The current state of the CAE, which can be Init (Initializing), Up, Down, or Tmout (Timed Out).
Hit Count	The number of HTTP GET requests sent to this CAE. A single video may contain multiple HTTP GET requests from the UE.
Timeout Consecutive (Cumulative)	The number of current consecutive timeouts that have occurred on the keep-alive heartbeat. This counter is reset to 0 if the Mobile Video Gateway is receiving no responses from the CAE. (Cumulative) is the total number of timeouts that have occurred since the last reset (clear) of the statistics for this CAE.
Last Failure	The duration of time since the CAE state was last transitioned to Down.
CAE-Group	The CAE group that contains the CAE.

Chapter 79

show call-control-profile

This chapter describes the output of the `show call-control-profile` command.

show call-control-profile full name

This command displays the detailed configuration for a specifically named call control profile.

Table 172. show call-control-profile full name Command Output Descriptions

Field	Description
Call Control Profile Name	The name of the call control profile you chose to view.
GPRS Attach All	Indicates whether the call control profile allows or restricts attaches of all subscribers using the GPRS access type.
GPRS Attach All Failure Code	The configured GMM failure code to be sent in reject messages to GPRS mobile subscribers attempting to attach.
UMTS Attach All	Indicates whether the call control profile allows or restricts attaches of all subscribers using the UMTS access type.
UMTS Attach All Failure Code	The configured GMM failure code to be sent in reject messages to UMTS mobile subscribers attempting to attach.
GPRS RAU Intra All	Indicates whether the call control profile is configure to allow or restrict mobile subscribers with GPRS access-type extensions from the intra-SGSN RAU procedure.
GPRS RAU Intra All Failure Code	The configured GMM failure cause code that identifies the reason an intra-SGSN RAU does not occur. This GMM cause code will be sent in the reject message to the GPRS mobile subscriber.
UMTS RAU Intra All	Indicates whether the call control profile is configure to allow or restrict mobile subscribers with UMTS access-type extensions from the intra-RAU procedure.
UMTS RAU Intra All Failure Code	The configured GMM failure cause code that identifies the reason an intra-SGSN RAU does not occur. This GMM cause code will be sent in the reject message to the UMTS mobile subscriber.
GPRS RAU Inter-PLMN All	Indicates whether the call control profile is configure to allow or restrict mobile subscribers with GPRS access-type extensions from triggering RAUs between different PLMNs.
GPRS RAU Inter-PLMN All Failure Code	The configured GMM failure cause code that identifies the reason an RAU does not occur between different PLMNs. This GMM cause code will be sent in the reject message to the GPRS mobile subscriber.
UMTS RAU Inter-PLMN All	Indicates whether the call control profile is configure to allow or restrict mobile subscribers with UMTS access-type extensions from triggering RAUs between different PLMNs.
UMTS RAU Inter-PLMN All Failure Code	The configured GMM failure cause code that identifies the reason an RAU does not occur between different PLMNs. This GMM cause code will be sent in the reject message to the UMTS mobile subscriber.
GPRS RAU Inter All	Indicates whether the call control profile is configure to allow or restrict mobile subscribers with GPRS access-type extensions from the inter-SGSN RAU procedure.
GPRS RAU Inter All Failure Code	The configured GMM failure cause code that identifies the reason an inter-SGSN RAU does not occur. This GMM cause code will be sent in the reject message to the GPRS mobile subscriber.

Field	Description
UMTS RAU Inter All	Indicates whether the call control profile is configured to allow or restrict mobile subscribers with UMTS access-type extensions from the inter-RAU procedure.
UMTS RAU Inter All Failure Code	The configured GMM failure cause code that identifies the reason an inter-SGSN RAU does not occur. This GMM cause code will be sent in the reject message to the UMTS mobile subscriber.
Failure Code For Peer Sgsn Address Resolution Failure	The configured GMM failure cause code that indicates that the SGSN cannot resolve the IP address for a peer SGSN. This GMM cause code will be sent in the reject message to the mobile subscriber.
GPRS SMS MO All	Indicates whether the call control profile allows or restricts mobile-originated SMS messages from subscribers using the GPRS access type.
GPRS SMS MO All Failure Code	The configured GMM failure cause code that indicates that mobile-originated SMS messages from GPRS subscribers are not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
UMTS SMS MO All	Indicates whether the call control profile allows or restricts mobile-originated SMS messages from subscribers using the UMTS access type.
UMTS SMS MO All Failure Code	The configured GMM failure cause code that indicates that mobile-originated SMS messages from UMTS subscribers are not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
GPRS SMS MT All	Indicates whether the call control profile allows or restricts mobile-terminated SMS messages to subscribers using the GPRS access type.
GPRS SMS MT All Failure Code	The configured GMM failure cause code that indicates that mobile-terminated SMS messages to GPRS subscribers are not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
UMTS SMS MT All	Indicates whether the call control profile allows or restricts mobile-terminated SMS messages to subscribers using the UMTS access type.
UMTS SMS MT All Failure Code	The configured GMM failure cause code that indicates that mobile-terminated SMS messages to UMTS subscribers are not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
GPRS Primary PDP Context Activation All	Indicates whether primary PDP context activation is allowed for GPRS mobile subscribers.
GPRS Secondary PDP Context Activation All	Indicates whether secondary PDP context activation is allowed for GPRS mobile subscribers.
GPRS PDP Context Activation All Failure Code	The configured GMM failure cause code that indicates that PDP context activation by GPRS subscribers is not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
UMTS Primary PDP Context Activation All	Indicates whether primary PDP context activation is allowed for UMTS mobile subscribers.
UMTS Secondary PDP Context Activation All	Indicates whether secondary PDP context activation is allowed for UMTS mobile subscribers.
UMTS PDP Context Activation All Failure Code	The configured GMM failure cause code that indicates that PDP context activation by UMTS subscribers is not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.

■ show call-control-profile full name

Field	Description
GPRS Nw Init Primary PDP Context Activation All	Indicates whether network-initiated primary PDP context activation is allowed for GPRS mobile subscribers.
GPRS Nw Init Primary PDP Ctxt Activation All Failure Code	The configured GMM failure cause code that indicates that network-initiated primary PDP context activation by GPRS subscribers is not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
GPRS Nw Init Secondary PDP Ctxt Activation All	Indicates whether network-initiated secondary PDP context activation is allowed for GPRS mobile subscribers.
GPRS Nw Init Secondary PDP Ctxt Activation All Failure Code	The configured GMM failure cause code that indicates that network-initiated secondary PDP context activation by GPRS subscribers is not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
UMTS Nw Init Primary PDP Context Activation All	Indicates whether network-initiated primary PDP context activation is allowed for UMTS mobile subscribers.
UMTS Nw Init Primary PDP Ctxt Activation All Failure Code	The configured GMM failure cause code that indicates that network-initiated primary PDP context activation by UMTS subscribers is not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
UMTS Nw Init Secondary PDP Ctxt Activation All	Indicates whether network-initiated secondary PDP context activation is allowed for UMTS mobile subscribers.
UMTS Nw Init Secondary PDP Ctxt Activation All Failure Code	The configured GMM failure cause code that indicates that network-initiated secondary PDP context activation by UMTS subscribers is not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
SRNS Intra All	Indicates whether intra-SRNS (Serving Radio Network Subsystem) relocation is allowed for mobile subscribers.
SRNS Intra All Failure Code	The configured GMM failure cause code that indicates that intra-SRNS relocation is not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
SRNS Inter All	Indicates whether inter-SRNS relocation is allowed for mobile subscribers.
SRNS Inter All Failure Code	The configured GMM failure cause code that indicates that inter-SRNS relocation is not permitted. This GMM cause code will be sent in the reject message to the mobile subscriber.
Sgtp-service Context	The name of the context that has the applicable SGTP service for this call control profile associated with it.
Service	The name of the SGTP service associated with the context.
Authentication All-Events	Indicates whether authentication for all events (attaches, activates, and so forth) has been enabled or disabled.
Authentication Attach	Indicates whether authentication for an Attach with a local P-TMSI or Attaches with an IMSI has been enabled or disabled.
Authentication Attach (Inter RAT)	Indicates whether Attach message authentication has been enabled or disabled for re-authorizing subscribers on a change in Radio Access Type (RAT) of the subscriber's node.
Authentication Attach (Gprs only)	Indicates whether Attach message authentication has been enabled or disabled for calls from GPRS mobile subscribers.
Authentication Attach (Combined)	Indicates whether authentication for combined GPRS/IMSI Attaches has been enabled or disabled.

Field	Description
Authentication Activate	Indicates whether authentication for activate requests has been enabled or disabled.
Authentication Service Request	Indicates whether authentication for all service requests has been enabled or disabled.
Authentication Service Request (Signaling)	Indicates whether authentication for signaling service requests has been enabled or disabled.
Authentication Service Request (Data)	Indicates whether authentication for data service requests has been enabled or disabled.
Authentication Service Request (Page Response)	Indicates whether authentication for page response service requests has been enabled or disabled.
Authentication RAU	Indicates whether authentication for routing area updates has been enabled or disabled.
Authentication RAU (Periodic)	Indicates whether authentication for periodic RAU Requests has been enabled or disabled.
Authentication RAU (Ra update)	Indicates whether authentication for RA update RAU Requests has been enabled or disabled.
Authentication RAU (Ra update with Local Ptmsi)	Indicates whether authentication for RA update using the local P-TMSI type of RAU Requests has been enabled or disabled.
Authentication RAU (Ra update with Foreign Ptmsi)	Indicates whether authentication for RA update using foreign P-TMSI type of RAU Requests has been enabled or disabled.
Authentication RAU (Imsi Combined Update)	Indicates whether authentication for RA update RAU Requests using the inter-RAT P-TMSI has been enabled or disabled.
Authentication RAU (Combined Update)	Indicates whether authentication for RAU Requests using the local P-TMSI has been enabled or disabled.
Authentication RAU (Combined Update IRAT PTMSI)	Indicates whether authentication for RAU Requests using inter-RAT and the local P-TMSI has been enabled or disabled.
Authentication RAU (Imsi Combined Update)	Indicates whether authentication for RAU Requests using IMSI and local P-TMSI values has been enabled or disabled.
Authentication RAU (Imsi Combined Update IRAT PTMSI)	Indicates whether authentication for RAU Requests using IMSI values, inter-RAT, and the local P-TMSI has been enabled or disabled.
Authentication Detach	Indicates whether authentication for Detach Requests has been enabled or disabled.
Authentication SMS	Indicates whether authentication for all SMS messages has been enabled or disabled.
Authentication SMS (MO-SMS)	Indicates whether authentication for mobile-originated SMS messages has been enabled or disabled.
Authentication SMS (MT-SMS)	Indicates whether authentication for mobile-terminated SMS messages has been enabled or disabled.
Regional Subscription Restriction Failure Code Value	The configured GMM failure cause code that indicates that mobile subscriber lacks the required subscription to place calls to the region. This GMM cause code will be sent in the reject message to the mobile subscriber.
ARD-Checking	Indicates whether access restriction data (ARD) checking in incoming subscriber data (ISD) messages has been enabled or disabled.

Field	Description
ARD Failure Code	The configured GMM failure cause code that indicates the incoming subscriber data has failed ARD checking. This GMM cause code will be sent in the reject message to the mobile subscriber.
Zone-Code Check	Indicates whether zone code checking has been enabled or disabled.
Usage of Auth Vectors From Old Sgsn	Indicates whether the ability of an SGSN to receive authorization vectors from other SGSNs has been enabled or disabled.
Order of Preference for Integrity Algorithm is	The integrity algorithm that receives first priority.
Order of Preference for Encryption Algorithm is	The encryption algorithm that receives first priority.
Order of Preference for Gprs Ciphering Algorithm is	The GPRS ciphering algorithm that receives first priority.
PTMSI-signature allocation	Indicates whether P-TMSI signature allocation has been enabled or disabled.
PTMSI-Signature-Reallocation Interval value UMTS	The time interval (in minutes) for skipping the P-TMSI signature service/RAU/attach request message procedure for UMTS mobile subscribers.
PTMSI-Signature-Reallocation Interval value GPRS	The time interval (in minutes) for skipping the P-TMSI signature service/RAU/attach request message procedure for GPRS mobile subscribers.
PTMSI-Signature-Reallocation Frequency value UMTS	How many times P-TMSI signature reallocation for service requests can be skipped for UMTS mobile subscribers.
PTMSI-Signature-Reallocation Frequency value GPRS	How many times P-TMSI signature reallocation for service requests can be skipped for GPRS mobile subscribers.
PTMSI-Signature-Reallocation Attach Frequency value UMTS	How many times P-TMSI signature reallocation for Attach requests can be skipped for UMTS mobile subscribers.
PTMSI-Signature-Reallocation Attach Frequency value GPRS	How many times P-TMSI signature reallocation for Attach requests can be skipped for GPRS mobile subscribers.
PTMSI-Signature-Reallocation RAU (Generic) Frequency value UMTS	How many times P-TMSI signature reallocation for routing area updates can be skipped for UMTS mobile subscribers.
PTMSI-Signature-Reallocation RAU (Generic) Frequency value GPRS	How many times P-TMSI signature reallocation for routing area updates can be skipped for GPRS mobile subscribers.
PTMSI-Signature-Reallocation RAU Periodic Frequency value UMTS	How many times P-TMSI signature reallocation for periodic routing area updates can be skipped for UMTS mobile subscribers.
PTMSI-Signature-Reallocation RAU Periodic Frequency value GPRS	How many times P-TMSI signature reallocation for periodic routing area updates can be skipped for GPRS mobile subscribers.
PTMSI-Signature-Reallocation RAU RA Update Frequency value UMTS	How many times P-TMSI signature reallocation for routing area update RA updates can be skipped for UMTS mobile subscribers.
PTMSI-Signature-Reallocation RAU RA Update Frequency value GPRS	How many times P-TMSI signature reallocation for routing area update RA updates can be skipped for GPRS mobile subscribers.

Field	Description
PTMSI-Signature-Realloc RAU Combined Update Frequency value UMTS	How many times P-TMSI signature reallocation for combined requests can be skipped for UMTS mobile subscribers.
PTMSI-Signature-Realloc RAU Combined Update Frequency value GPRS	How many times P-TMSI signature reallocation for combined requests can be skipped for GPRS mobile subscribers.
PTMSI-Signature-Realloc RAU Imsi Combined Update Frequency value UMTS	How many times P-TMSI signature reallocation for combined RAU updates with IMSI values can be skipped for UMTS mobile subscribers.
PTMSI-Signature-Realloc RAU Imsi Combined Update Frequency value GPRS	How many times P-TMSI signature reallocation for combined RAU updates with IMSI values can be skipped for GPRS mobile subscribers.
PTMSI-Signature-Realloc Ptmsi-Reallocation-Cmd Update Frequency value UMTS	How many times P-TMSI signature reallocation during PTMSI reallocation can be skipped for UMTS mobile subscribers.
PTMSI-Signature-Realloc Ptmsi-Reallocation-Cmd Update Frequency value GPRS	How many times P-TMSI signature reallocation during PTMSI reallocation can be skipped for GPRS mobile subscribers.
PTMSI-Realloc Attach	Indicates whether P-TMSI reallocation has been enabled or disabled.
PTMSI-Realloc Interval	The time interval (in minutes) for skipping the P-TMSI reallocation during the service/RAU/attach request message procedure.
PTMSI-Realloc Frequency	How many times P-TMSI reallocation can be skipped during service/RAU/attach request message procedure.
PTMSI-Realloc RAU	Indicates whether P-TMSI reallocation during routing area updates has been enabled or disabled.
PTMSI-Realloc RAU (Periodic)	Indicates whether P-TMSI reallocation during periodic routing area updates has been enabled or disabled.
PTMSI-Realloc RAU (Periodic) Frequency value	How many times P-TMSI reallocation can be skipped during the periodic RAU message procedure.
PTMSI-Realloc RAU (Ra-Update)	Indicates whether P-TMSI reallocation during the RA update RAU request procedure has been enabled or disabled.
PTMSI-Realloc RAU (Ra-Update) Frequency	How many times P-TMSI reallocation can be skipped during the RA update RAU message procedure.
PTMSI-Realloc RAU (Combined-Update)	Indicates whether P-TMSI reallocation during the RAU combined update procedure has been enabled or disabled.
PTMSI-Realloc RAU (Combined-Update) Frequency	How many times P-TMSI reallocation can be skipped during the RAU combined update message procedure.
PTMSI-Realloc RAU (Combined-Update with IMSI attach)	Indicates whether P-TMSI reallocation during the RAU combined update with IMSI procedure has been enabled or disabled.

Field	Description
PTMSI-Realloc RAU (Combined-Update with IMSI) Frequency	How many times P-TMSI reallocation can be skipped during the RAU combined update with IMSI message procedure.
PTMSI-Realloc Service Request (Signalling)	Indicates whether P-TMSI reallocation during signaling service requests has been enabled or disabled.
PTMSI-Realloc Service Request (Signalling) Freq	How many times P-TMSI reallocation can be skipped during the signaling service request message procedure.
PTMSI-Realloc Service Request (Data)	Indicates whether P-TMSI reallocation during data service requests has been enabled or disabled.
PTMSI-Realloc Service Request (Data) Freq	How many times P-TMSI reallocation can be skipped during the data service request message procedure.
PTMSI-Realloc Service Request (Page Response)	Indicates whether P-TMSI reallocation during page response service requests has been enabled or disabled.
PTMSI-Realloc Service Request (Page Response) Freq	How many times P-TMSI reallocation can be skipped during the page response service request message procedure.
Inactivity detection for establishing pdp contexts	Indicates whether an SGSN will be periodic polled to verify that it can accept requests to establish a PDP context.
Inactivity detection for establishing pdp contexts - Timer	The timeout value in milliseconds for determining that a SGSN is unresponsive.
Inactivity detection for establishing pdp contexts - Action	The action to be taken if a SGSN is declared unresponsive.
Monitor Re-attaches after Inactivity Detach	Indicates whether the SGSN will be monitored to determine if it has become responsive again after an inactivity timeout and detach.
Charging Characteristics Prefer Local	When enabled, indicates whether the call-control profile prefers the charging characteristics settings from the call control profile instead of the charging characteristics received from the HLR.
Charging Characteristics Behavior	The behavior bit in charging characteristics provided by the call control profile when the HLR does not provide a value.
Charging Characteristics Profile-Index	The charging characteristics profile index specified by the call control profile, such as 4 for prepaid billing or 8 for normal billing.
Charging Characteristics Behavior No Records	The behavior bit in charging characteristics that is used to determine that no accounting records will be generated.
APN restriction	If this feature is enable, the SGSN sends the maximum APN restriction value in every CPC Request message sent to the GGSN
UMTS Gmm-Information	When this feature is enabled, indicates that GPRS mobility management (GMM) parameters will be included in message to UMTS mobile subscribers.
GPRS Gmm-Information	When this feature is enabled, indicates that GMM parameters will be included in message to GPRS mobile subscribers.

Field	Description
User Equipment Identity Retrieval	Indicates whether International Mobile Equipment Identity (IMEI) or software version (SV) retrieval and validation has been enabled or disabled.
MAP UGL Message. Include Access Type Private Extension	The specific access-type private extension included in GPRS Location Update (GLU) request MAP messages.
MAP UGL Message. Include IMEISV	The specific International Mobile equipment Identity-Software Version (IMEI-SV) information included in GLU request MAP messages.
Reuse of authentication triplets	Indicates whether the reuse of authentication triplets in the event of a failure has been enabled or disabled.
Re-Authentication	Indicates whether the re-authentication feature, which instructs the SGSN to retry authentication with another RAND in situations where failure of the first authentication has occurred, has been enabled or disabled.
Direct Tunnel	Indicates if the SGSN allows direct tunneling if the direct tunneling is supported by destination node.
GTPU Fast Path	Indicates whether Fast Path support for network processing unit (NPU) processing of GTP-U packets of user sessions has been enabled or disabled.
Super Charger	Indicates whether the SGSN's ability to work with a super-charged network is enabled or disabled. By enabling the super charger functionality for 2G or 3G connections controlled by an operator policy, the SGSN changes the hand-off and location update procedures to reduce signaling traffic management.
Sending Radio Access Technology (RAT) IE	When this feature is enabled, the SGSN sends RAT information elements (IEs) within GTP messages.
Sending User Location Information (ULI) IE	When this feature is enabled, the SGSN sends ULI IEs within GTP messages.
Sending IMEISV IE	When this feature is enabled, the SGSN includes the IMEISV values of the mobile subscriber when sending GTP messages of the type "Create PDP Context Request".
Derive IMEISV from IMEI	When this feature is enabled, the SGSN sends the IMEI to the GGSN as an IMEI-SV.
Sending MS Time Zone IE	When this feature is enabled, the SGSN sends the mobile subscribers timezone IE in GTP messages of the type "Create PDP Request" and "Update PDP Context Request".
Treat as HPLMN	When this feature is enabled, the MME or SGSN treats an IMSI series as coming from the home PLMN.
Location Reporting for UMTS	When this feature is enabled, the MME can query and receive UE location reports from an eNodeB.
Location Reporting for GPRS	When this feature is enabled, the MME can query and receive UE location reports from an eNodeB.
Network Feature Support	
IMS Voice Over PS	Indicates whether IMS Voice over Packet-Switched information element (IE) is supported as part of the MME (Network) Feature
Qos	Indicates the transmission of quality of service (QoS) parameters has been enabled or disabled.
AMBR	Indicates whether an aggregate maximum bit rate (AMBR) will be enforced for user equipment.

■ show call-control-profile full name

Field	Description
Gn/Gp ARP	Indicates whether Gn-Gp pre-release 8 ARP and pre-emption parameters will be enforced or not.
High Priority (H) (Default)	The high-priority (address retention protocol) ARP value used for QoS.
MediumPriority (M) (Default)	The medium-priority ARP value used for QoS.
Gn/Gp Pre-Emption Capabilities (Default)	The pre-emption capability criteria for PDP contexts imported from an SGSN on Gn/Gp interfaces.
Gn/Gp Pre-Emption Vulnerabilities (Default)	The pre-emption vulnerability criteria for PDP contexts imported from an SGSN on Gn/Gp interfaces.

Chapter 80

show card

This chapter includes the **show card** command output tables.

show card diag

Table 173. show card diag Command Output Descriptions

Field	Description
Counters	Displays boot counter information for the card. The following counters are reported: • Successful warm boots: Warm boots occur upon a software reset of the card. • Successful cold boots: Cold boots occur when the card experiences a hardware reboot. • Total boot attempts: This is the sum of successful and unsuccessful warm and cold boots. If this number is not equal to the total number of successful warm boots and the number of successful cold boots, then boot failures have occurred. This situation may indicate a problem with this card that requires further investigation. • In Service Date: Timestamp indicating when this card was placed in service. Each of the above counters provide a timestamp indicating the most recent occurrence. NOTE: Counters are <u>not</u> displayed for line card diagnostics.
Status	Status is reported for the following items: • IDEEPROM Magic Number: Indicates whether or not the device map has been initialized. The ID EEPROM device stores hardware, diagnostic and software configuration data. • Boot Mode: Displays the current boot mode. – Normal (boot to StarOS, default mode), Extended diagnostics or Diagnostic CLI. • Card Diagnostics: Indicates the current status of the card's internal diagnostics. The two possible states are: Pass (all diagnostics passed) and Failed (one or more diagnostics did not pass). • Current Failure: Indicates any failure that is currently being reported by this card. If no failures were detected, this item will display None. • Last Failure: Indicates the last failure reported by this card since its event log was last cleared. • Card Usable: Indicates whether or not the card is usable. “Usability” is based on the operational state of the card (active, standby, or offline), whether or not the Administrative state is enabled (the card is configured for use via software), and whether or not the card’s interlock switch is locked. Either a Yes or a No will be displayed.
Boot/Diag Log (ASR 5000 only)	Displays the contents of the boot and diagnostics log. NOTE: The boot and diagnostic log contents are <u>not</u> displayed for line card diagnostics.
Error Log (ASR 5000 only)	Displays the contents of the error log. NOTE: The error log contents are <u>not</u> displayed for line card diagnostics.
Current Environment	Displays the results for the following measurements: • Temperature measurements: Indicates the current operating temperatures and provides the maximum safe temperature for comparison. • Voltage measurements: Indicates the current input status for the various DC sources and provides the acceptable upper and lower limits for comparison.

show card hardware

Table 174. show card hardware Command Output Descriptions

Field	Applicable Card(s)	Description
Card slot#	All	Displays the card slot number.
Card Type	All	Indicates the type of card installed.
Card Description	All	Displays the card acronym,
Part Number	ASR 5000 Starent Part Number	Displays the Starent part number.
Serial Number	ASR 5000 Starent Part Number	Displays the Starent serial number.
CLEI	ASR 5000 cards only	Displays the COMMON LANGUAGE Equipment Code registered for this card.
UDI Serial Number	All	Displays the UDI (Unique Device Identifier) serial number.
UDI Product ID	All	Displays the UDI version identifier.
UDI Version ID	All	Displays the UDI version identifier.
UDI Top Assem Num	All	Displays the UDI top assembly number.
UDI TAN Revision	All	Displays the revision level for the top assembly number (TAN).
UDI Deviation number	ASR 5000 cards only	Displays the deviation number.
Switch Fabric Nodes	ASR 5000 cards only	Displays the current methodology used for the switch fabric.
Card Programmables	All	Indicates whether or not the firmware running on this card is up to date.



Important: The output of this command will also display other types of information relative to the CPUs and firmware running on the specific card types. This information varies based on the platform type.

show card info

Table 175. show card info Command Output Descriptions

Field	Applicable Card(s)	Description
Slot Type	All	Displays the acronym for the card type.
Card Type	All	Indicates the type of card installed.
Operational State	All	Displays the operational state of the card. The possible operational states are: • Active: Indicates that the card is an active component that will be used to process subscriber data sessions. • Standby: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • Offline: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that it is not completely installed (i.e. the card interlock switch is not locked, refer to the System Installation Guide for information on installing cards in the system) or that its processes have been halted.
Desired Mode	ASR 5000 Processing Cards, SPIOs, and line cards only	Displays the configured mode of the card. Through software configuration the card could be placed into either the active or standby mode.
Last State Change	All	Displays the time of the last operational state change for the card.
Administrative State	All	Indicates whether or not the card has been configured for use via software. If it has been configured, Enabled will be displayed. If not, Disabled will be displayed.
Card Lock	All	Displays whether or not the card's interlock switch is Locked or Unlocked.
Halt Issued	All	Displays whether or not this card was the target of a halt command issued by an administrator or operator. The halt command stops all tasks and processes running on the card. If the card has been halted, a Yes will be displayed. If not, a No will be displayed.
Reboot Pending	All	Displays whether or not the card will be undergoing a reboot. If the card is being rebooted, a Yes will be displayed. If not, a No will be displayed.

Field	Applicable Card(s)	Description
Upgrade In Progress	Management and packet processing cards	Indicates whether an upgrade is in progress. The following operations are not allowed while a card is upgrading: • change card [no] shutdown (config) • change card active (config) • change card redundancy (config) • card halt (exec) • card reboot (exec) • start an online upgrade Level unlock operations are ignored while a card is upgrading.
Card Usable	All	Indicates whether or not the card is usable. “Usability” is based on the operational state of the card (active, standby, or offline), whether or not the Administrative state is enabled (the SMC can communicate with it), and whether or not the card’s interlock switch is locked. Either a Yes or a No will be displayed.
Single Point of Failure	All	Displays whether or not the component is a single point of failure (SPOF) in the system. If the component is a SPOF, then a Yes will appear in this column. If not, a No will be displayed.
Attachments	ASR 5000 management and processing cards	Displays the slot number and card type(s) that this card is associated with. For example, if this information is being displayed for a Processing Card, then the line card(s) that the Processing Card is associated with will be displayed.
Temperature	All	Indicates the current operating temperature and provides the maximum safe temperature for comparison.
Voltages	All	Indicates whether the power levels that the card is receiving are within acceptable limits. Every card in the system has at least two power inputs. If all of the power inputs are within specification, a Good will be displayed. If even one of these inputs is out of the acceptable range, then a Bad ***ALARM*** will be displayed.
Card LEDs	All	Displays the state of the Run/Fail, Active, and Standby light emitting diodes (LEDs) on the front panels of each of the cards. The LEDs will be displayed as either Green, Red, or Off. • Run/Fail LED: Green is normal, Red or Off indicate a problem. NOTE: If the Run/Fail LED is either Red or Off, refer to System Administration and Configuration Guide for information on troubleshooting the problem. • Active: Green indicates that the card is in active mode. Off indicates that the card is in standby mode. • Standby LED: Green indicates that the card is in standby mode. Off indicates that the card is in active mode.

Field	Applicable Card(s)	Description
System LEDs	ASR 5000 SMC	Displays the state of the Status and Service LEDs on the SMC. The Status LED will be displayed as either Green, Red, or Off. The Service LED will be displayed as either Amber, or Off. • Status LED: Green is normal, Red or Off indicate a problem. NOTE: If the Run/Fail LED is either Red or Off, refer to System Administration and Configuration Guide for information on troubleshooting the problem. • Service LED: Amber indicates that maintenance is needed. Off indicates that no maintenance is necessary. NOTE: If the Status LED is Amber, refer to System Administration and Configuration Guide for information on troubleshooting the problem.
CPU0 through 3	Management and packet processing cards	Displays how the CPUs on the card are being used.

show card mappings

Table 176. show card mappings Command Output Descriptions

Field	Description
Slot (left-most column)	Displays the chassis slot number and the type of line card installed.
Mapping	Displays the mapping or communication path from the line card to the application card. The possible mappings are: • Direct: The line card is operating in conjunction with the application card installed directly in front of it. • NOTE: Cross mappings only occur if the SMC that the SPIO was formerly operating behind became disabled (either automatically due to an error, or through manual configuration). • RCC 40: A line card (non-SPIO) installed in chassis slots 17 through 23 or 26 through 32 is operating in conjunction with a Processing Card installed in a slot that is not directly in front via the RCC in slot 40. • RCC 41: A line card (non-SPIO) installed in chassis slots 33 through 39 or 42 through 48 is operating in conjunction with a Processing Card installed in a slot that is not directly in front via the RCC in slot 41. NOTE: RCC 40 and RCC 41 mappings will only occur if the Processing Card that the line card was formerly operating behind became disabled (either automatically due to an error, or through manual configuration).
Slot (right-most column)	Displays the chassis slot number and the type of application card installed.

show card table

Table 177. show card table Command Output Descriptions

Field	Description
Slot	Displays the chassis slot number and card type acronym.
Card Type	Displays the type of card installed.
Oper State	Displays the operational state of the card. The possible operational states are: • Active: Indicates that the card is an active component that will be used to process subscriber data sessions. • Standby: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • Offline: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that it is not completely installed (i.e. the card interlock switch is not locked, refer to the System Installation Guide for information on installing cards in the system) or that its processes have been halted.
SPOF	Displays whether or not the component is a single point of failure (SPOF) in the system. If the component is a SPOF, then a Yes will appear in this column. If not, a No will be displayed.
Attach	This column is valid only for the ASR 5000 platform. It displays the line card that the Processing Cards and SMCs are using for network access. This column will only be populated for the RCCs in the event that tasks and processes were migrated from an active Processing Card to a standby Processing Card. The RCC creates a path from the standby Processing Card to the line cards.

Chapter 81

show certificate

Table 178.**show certificate** Command Output Descriptions

Field	Description
Name	Certificate name
Data	Data output varies with content at the time of certificate creation but will include: X.509 version numberSerial numberAlgorithm typeIssuing authorityValid datesPublic key encrypted data

Chapter 82

show content-filtering

This chapter includes the `show content-filtering` command output tables.

show content-filtering category database

Table 179. show content-filtering category database active verbose Command Output Descriptions

Field	Description
Database Status	Indicates latest status of rating databases. Possible status are: • OK: Indicates all SRDB tasks are running and database is good. • ERROR-Database Corrupt: Indicates all SRDB tasks are running and database is bad or corrupt. • ERROR-No database at specified pathname: Indicates all SRDB tasks are running and database is not available at specified path/location/directory. • MERGING: Displayed during merging of the incremental database with full OPTCMDB database. • LOADING: Displayed during loading of the database. • n/a: Indicates that specified database is not loaded and its status is unknown.
Path	Path specified to base location or folder for Static Rating Databases (SRDB). It may have one of the following flags: • *ACTIVE*: Indicates database is valid and good. • *NOT LODAED*: Indicates that there is an error in database.
Last Upgrade Status	Status of last attempt of rating database upgrade. Possible status are: • Successful: Displayed after the upgrade is completed successfully. • Failure: Displayed in case of failure system will rollback to previous database. • n/a: Displayed in case of first time loading of database.
Type	Type of SRDB with checksum. Type of SRDB may be Full or Incremental.
Version	Latest version status of SRDB.
Creation Time	Time of creation of SRDB in DAY MM DD HH:MM:SS YYYY format.
Hostname	Host server name where SRDB base directory existing.
Comment	User defined remarks/description about database.
Last Access Time	Date and time in DAY MM DD HH:MM:SS YYYY format when database was last accessed.
Last Modified Time	Date and time in DAY MM DD HH:MM:SS YYYY format when database was last modified.
Last Status Change Time	Date and time in DAY MM DD HH:MM:SS YYYY format when status of access time or modified time was changed.

show content-filtering category database all

Table 180. show content-filtering category database all Command Output Descriptions

Field	Description
Content Filtering Static Rating Databases:	
Last Upgrade Status	Status of the last attempt of rating database upgrade. Possible statuses are: • Success: Displayed after the upgrade is completed successfully. • Failure: Displayed in case the full upgrade failed. System will rollback to previous database. • n/a: Displayed in case of first time loading of database.
Path	Path specified to base location or folder for Static Rating Databases (SRDB). It may have one of the following flags: • *ACTIVE*: to indicate database is valid and good. • *NOT LODAED*: to indicate that there is an error in database.
Database Status	Latest status of rating databases. Possible status are: • OK: Indicates all SRDB tasks are running and database is good. • ERROR-Database Corrupt: Indicates all SRDB tasks are running and database is bad or corrupt. • ERROR-No database at specified pathname: Indicates all SRDB tasks are running and database is not available at specified path/location/directory. • MERGING: Displayed during merging of the incremental database with full OPTCMDB database. • LOADING: Displayed during loading of the database. • n/a: Indicates that specified database is not loaded and its status is unknown.

show content-filtering category database facility srdbmgr all

Table 181. show content-filtering category database facility srdbmgr all Command Output Descriptions

Field	Description
Content Filtering SRDB Instance Based Database Configuration:	
SRDB Instance	Indicates the running Static Rating Database (SRDB) Manager instance number.
DB Load Status	Indicates the database load status.
DB Version	Indicates the version of loaded database.
Volume	Indicates the database volume number.
Number of URLs	Indicates the number of URLs available in specific volume of database.
Number of Blocks/Page	Indicates the average number of blocks per page rated in URLs available in specific volume of database.
The following indicate Dynamic Content Filtering statistics at SRDB level:	
Dynamic SRDB Instance	Indicates the running Dynamic SRDB Manager instance number.
RaterPkg Load Status	Indicates the Dynamic Rater Package load status: • Loaded • Not-loaded
Number of Model files	Indicates the number of model files (used for language detection and category recognition) available.
Standby Dynamic SRDB Instance	Indicates standby Dynamic SRDB instance number.
RaterPkg Load Status	Indicates the Dynamic Rater Package load status: • Loaded • Not-loaded
Number of Model files	Indicates the number of model files (used for language detection and category recognition) available.

show content-filtering category policy-id id

Table 182. show content-filtering category policy-id Command Output Descriptions

Field	Description
Service Name	The content filtering servicename.
Content Filtering Policy	The content filtering policy ID, and description, if set.
Content filtering Categories:	
Category	Category of the content rated.
Priority	Priority of the CF Category in the CF Policy.
Action	Action taken for the indicated result of CF analysis.
Content Insert	The content string inserted in place of message returned from prohibited or restricted site or content server.
Redirect	The URL to redirect subscriber.
EDR	The EDR file format name to generate separate CF EDRs based on action and content category.
Timeout Action	The timeout end condition if rating cannot be performed.
Discarded-Flow-Content-ID	The content ID for the discarded flows. If not configured, this field is not displayed.

show content-filtering category statistics

Table 183. show content-filtering category statistics Command Output Descriptions

Field	Description
Service Name	Name of the Content Filtering service.
Content Filtering status	Status of the current Content Filtering service.
Overall Status	Indicates capability of the system to perform Content Filtering service.
Content Filtering Statistics	Indicates the Content Filtering statistics group information.
Static Rating	Information on static rating content-filtering.
SRDB Request Count	Total number of requests received.
SRDB Response Total	Total number of responses sent for requests.
SRDB Response Successful	Total number of responses for successful requests.
SRDB Response Not Rated	Total number of responses for requests without rating.
SRDB Response Not in DB	Total number of responses for unknown or undefined requests.
Number of Incremental DB Received	Total number of incremental rating database received by the Content Filtering subsystem.
Number of Successful Incremental Upgrade Performed	Total number of incremental upgrades performed successfully with incremental rating database.
Number of Full DB Received	Total number of full rating database received by the Content Filtering subsystem.
Number of Successful Full Upgrade Performed	Total number of full upgrades performed successfully with incremental rating database.
Time Since Last Upgrade (dd:hh:mm:ss)	Time since last upgraded, full or incremental, performed.

show content-filtering category statistics facility srdbmgr all

Table 184. show content-filtering category statistics facility srdbmgr all Command Output Descriptions

Field	Description
Content Filtering status	Indicates Content Filtering service status.
Overall Status	Indicates the system's ability to perform content filtering.
Dynamic Content Filtering status	Indicates Dynamic Content Filtering service status.
Overall Status	Indicates the system's ability to perform dynamic content filtering.
Content Filtering SRDB Instance Based Statistics	Indicates the group statistics of content filtering based on Static Rating Database Manager instance.
Instance Number	Indicates the SRDB Manager's instance number.
Static Rating:	
Request Count	Total number of requests received.
Response Total	Total number of responses sent for requests.
Response Successful	Total number of responses for successful requests.
Response Not Rated	Total number of responses for requests without rating.
Response Not in DB	Total number of responses for unknown or undefined requests.
Average Ratings/sec	Indicates the average ratings performed per second.
Number of URLs rated by domain	Total number of URLs rated with given domain.
Dynamic Content Filtering SRDB Instance Based Statistics:	
Instance Number	Indicates the instance number of SRDB manager.
Dynamic Rating:	
Request Count	Total number of requests received.
Response Total	Total number of responses sent for requests.
Response Successful	Total number of responses for successful requests.
Response Not Rated	Total number of responses for requests without rating.
Histogram based on URL length	Indicates the histogram statistics of URLs grouped by length of URL.
Histogram for number of URLs hit per SN category (sorted on no. of URLs):	Indicates the specific category and the number of URLs hit per category. If, during runtime, an x-category was added, the x-category is also displayed.

show content-filtering category url <url> policy-id <id> verbose

Table 185. show content-filtering category url <url> policy-id <id> verbose Command Output Descriptions

Field	Description
URL	The URL path for Static Rating Category Database.
URL Root Domain	The URL's root domain information.
URL OPTCMDB Volume	The Optimized Content Rating Master Database (OPTCMDB) volume and version.
URL Hash	Indicates the URL hash in URL OPTCMDB.
Domain Used For Rating	Indicates whether domain name is used for URL rating. Possible values are: • TRUE • FALSE
URL Category	The URL's category.
Action Configured	Indicates the action configured.  Important: In case of multiple categories, the action configured for a category with highest priority is displayed. If Dynamic Content Filtering is enabled, the action configured for DYNAM and UNKNOWN is displayed as Dynamic (i.e. the URL is sent for Dynamic categorization). In case more than one category is returned with DYNAM and if it is configured with higher priority then, that action will be shown.
Content Insertion String	Indicates the content insertion string.  Important: This field is displayed only if Dynamic CF is not enabled.
Redirect URL	Indicates the redirected URL.

show content-filtering server-group name

Table 186.show content-filtering server-group name Command Output Descriptions

Field	Description
Content Filtering Group	The name of the Content Filtering Server Group (CFSG).
Context	The name of the content in which CFSG is configure.
Origin Address	IP address of the origin endpoint or ICAP client.
ICAP Address(Port)	IP address and port number of ICAP server with in CF Server Group.
Max Outstanding	Total number of unanswred outstanding messages to this ICAP server.
Failure Action	Displays the action taken on connection failure.
Response Timeout	Displays the configured response-timeout duration to wait for response.
Connection Retry Timeout	Displays the configured connection retry timeout duration to check the TCP connection status between ICAP sever and client.
Dictionary	Specifies the configured dictionary to use for encoding the requests to the server(s).
Deny Message	Specifies the configured text string message that is returned to the subscriber in a deny response.

show content-filtering server-group statistics

Table 187. show content-filtering server-group statistics Command Output Descriptions

Field	Description
Content Filtering Group	The name of the Content Filtering Server Group (CFSG).
Connection Statistics	Displays the ICAP connection related statistics.
Current Open Connections	Total number of open connections.
Connection DHOST requests	Total number of DHOST requests.
Successfull Connections	Total number of successful connections.
Connections DHOST remove	Total number of connections removed from DHOST.
Connection SHUTDOWN req	Total number of requests for SHUTDOWN.
ACF Unreachable(read)	Total number of attempts for Active Content Filter server (ICAP server) to read.
ACF Unreachable(write)	Total number of attempts for Active Content Filter server (ICAP server) to write.
Reconnect attempts	Total number of reconnect attempts for ACF server (ICAP server).
Connection Timeout	Total number of connections timeout after reconnect attempts for ACF server (ICAP server).
Connection Failure Statistics	Displays connection failure statistics.
Connection DHOST errors	Total number of connection DHOST errors in connection.
Connection CONNECT error	Total number of connection CONNECT errors in connection.
Socket open errors	Total number of errors due to SOCKET open in connection.
Connection bind errors	Total number of BIND errors in connection.
Connection setvr errors	Total number of SETVER errors in connection.
Connection NONBLOCK errors	Total number of NONBLOCK errors in connection.
Connection SHUTDOWN errors	Total number of SHUTDOWN errors in connection.
Incomplete 3-way handshaking	Total number of errors due to incomplete 3-way handshaking in TCP connection.
ACF Statistics	Displays Active Content Filter (ICAP server) statistics.
ACF Requests Created	Total number of requests created for ACF.
Response Timeout	Total number of response timeout for requests to ACF.
Write request success	Total number of successful WRITE requests.
Write request failed	Total number of failed WRITE requests.
Read response success	Total number of successful READ response.

Field	Description
Read response failed	Total number of failed READ response.
HTTP Permit	Total number of HTTP URLs permitted from ACF.
WAP Permit	Total number of WAP URLs permitted from ACF.
HTTP Deny	Total number of HTTP URLs denied from ACF.
WAP Deny	Total number of WAP URLs denied from ACF.
HTTP Redirect	Total number of HTTP URLs redirected from ACF.
WAP Redirect	Total number of WAP URLs redirected from ACF.
Invalid ACTION	Total number of invalid ACTION message from ACF.
Redirect URL not defined	Total number of errors due to undefined redirect URL.
Buffer List Empty	Total number of errors due to empty buffer list.
Failure action Permit	Total number of connections permitted after connection failure.
Failure action Deny	Total number of connections denied after connection failure.
Failure action Discard	Total number of connections discarded after connection failure.
Failure action Terminate	Total number of connections terminated after connection failure.
Failure actions taken	Total number of actions taken after failure in connection failure.
Num pkts dropped for DENY	Total number of packets dropped after denying the connection due to failure in connection.
Num pkts dropped for REDIRECT	Total number of packets dropped after redirecting the connection due to failure in connection.
Num pkts dropped for DENY Timeout action	Total number of packets dropped after denying the connection due to timeout action.
Num pkts dropped for REDIRECT Timeout action	Total number of packets dropped after redirecting the connection due to timeout action.
ACF Resp Parse Statistics	Displays the statistics related to ACF response parsing.
Parse ACF resp success	Total number of successful ACF parse response.
Parse ACF resp ver err	Total number of successful ACF parse response version error.
Misc Statistics	Displays the miscellaneous statistics.
Total pkts sent	Total number of packets sent through ICAP connection.
Invalid ACF group config	Total number of errors due to invalid CF Server Group (Active Content Filter server groups) configuration.
Invalid bind address	Total number of errors due to invalid binding address configuration.
Invalid ICAP address	Total number of errors due to invalid ICAP server addresses.

Chapter 83

show congestion-control

This chapter includes the `show congestion-control` command output tables.

show congestion-control statistics a11mgr instance

Table 188. show congestion-control statistics a11mgr instance Command Output Descriptions

Field	Description
Current congestion status	The current congestion control state as “Cleared” or “Applied”.
Congestion applied	Displays the number of times the system invoked a congestion control policy for the specified service type.
Congestion Control Resource Limits	Indicates the congestion control threshold that was triggered. For more information, refer to the congestion-control threshold command in the Global Configuration Mode chapter of the <i>Command Line Interface Reference</i> .

show congestion-control statistics asngwmgr instance

Table 189. show congestion-control statistics asngwmgr instance Command Output Descriptions

Field	Description
Current congestion status	The current congestion control state as “Cleared” or “Applied”.
Congestion applied	Displays the number of times the system invoked a congestion control policy for the specified service type.
Congestion Control Resource Limits	Indicates the congestion control threshold that was triggered. For more information, refer to the congestion-control threshold command in the Global Configuration Mode chapter of the <i>Command Line Interface Reference</i> .
system cpu use exceeded	Indicates the number of time the ASNGW Manager exceeded the system CPU usage limit.
service cpu use exceeded	Indicates the number of time the ASNGW Manager exceeded the CPU usage limit specified for this service.
system memory use exceeded	Indicates the number of time the ASNGW Manager exceeded the allocated system memory usage limit.
port rx use exceeded	Indicates the number of time the ASNGW Manager exceeded the Rx port usage limit.
port tx use exceeded	Indicates the number of time the ASNGW Manager exceeded the Tx port usage limit.
port specific rx use exceeded	Indicates the number of time the ASNGW Manager exceeded the Rx port usage limit for a specific port number.
port specific tx use exceeded	Indicates the number of time the ASNGW Manager exceeded the Tx port usage limit for a specific port number.
max sess use exceeded	Indicates the number of time the ASNGW Manager exceeded the maximum session usage limit for a service.
license use exceeded	Indicates the number of time the ASNGW Manager exceeded the maximum license usage limit.
msg queue size use exceeded	Indicates the number of time the ASNGW Manager exceeded the message queue size usage.
msg queue wait time exceeded	Indicates the number of time the ASNGW Manager exceeded the message queue wait time.
license threshold exceeded	Indicates the number of time the ASNGW Manager exceeded the license threshold limit.
max sess threshold exceeded	Indicates the number of time the ASNGW Manager exceeded the maximum session threshold limit.
Sessions disconnected due to overload disconnect	Indicates the total number of sessions disconnected due to overload.

Chapter 84

show context all

Table 190.show context all Command Output Descriptions

Field	Description
Context Name	The name of a configured context.
Context ID	The system ID of the context.
State	The current state of the context. The possible states are: Active: The VPN Manager task is running and is ready to respond to the requests. Initializing: The Context is configured but not yet started. The VPN Controller knows about it and is in the process of starting the VPN Manager. In other words, the VPN Manager services are not available yet. Inactive: The VPN Manager is configured but either the task is not running yet or the VPN Manager has just crashed and the restart process is going on.

Chapter 85

show cpu table

Table 191. **show cpu table** Command Output Descriptions

Field	Description
CPU	Displays the number of the CPU in the format <i>slot_number/cpu_number</i> .
State	Indicates the CPU state as one of the following: Active: The CPU is active and available for session processing. Sndby: The CPU is on standby.
Load	Indicates the CPU load for the following time intervals: Now: Current load 5min: Load within the last 5 minutes 15min: Load within the last 15 minutes
CPU-Usage	Indicates the CPU usage as a percentage for the following time intervals: Now: Current usage 5min: Usage within the last 5 minutes 15min: Usage within the last 15 minutes
Memory	Indicates the memory usage for the following time intervals: Now: Current usage 5min: Usage within the last 5 minutes 15min: Usage within the last 15 minutes In addition, the total memory available on the CPU is displayed. The PSC has two CPUs, the main CPU (CPU 0) contains 16 GB of memory. The second CPU is contained within the card's NPU and provides an additional 512 MB of memory. The PSC2 has two CPUs, the main CPU (CPU 0) contains 32 GB of memory.

Chapter 86

show crypto

This chapter includes the **show crypto** command output tables.

show crypto ikev2-ikesa security-associations summary

Table 192. show crypto ikev2-ikesa security-associations summary Command Output Descriptions

Field	Description
Mgr ID	SA Manager ID number
VPN	SA VPN number
Local IPsec GW	Local default gateway IP address
Port	UDP port number
Remote IPsec GW	Remote default gateway IP address
Port	UDP port number
State	Authentication state • I = Initiator • R = Responder
Lifetime/Remaining	Originally configured lifetime for the SA in seconds/number of seconds left in this lifetime.

show crypto ipsec security-associations

Field	Description
Map Name	The name of the crypto map facilitating the security association.
Local Address	The IP address of the interface on the security gateway facilitating the security association.
Current Peer	The IP address of the interface on the peer gateway facilitating the security association.
Crypto Type	The type of crypto map facilitating the security association, which can be: • Dynamic Map • IKEv1 Map • IKEv2 Map • Manual Map
SA State	The state of the security association, which can be: • Established • Partially Established • No SAs
IPSec Manager	The identifying number of the IPsec manager facilitating the security association.
Rekeying	The state of rekeying for the security association, which can be: • Enabled • Disabled
Redundancy Status	The state of the security association, which can be: • Original Tunnel: No failure has occurred. • Recovered Session: A failure has occurred and a recovered session has been created.
Allocated Address	The IP address allocated to the Network Access Identifiers (NAIs) of the users.
Phase 1	The NAI used in Phase 1 authentication.
Phase 2	The NAI used in Phase 2 authentication.
Encoded	The number of packets and bytes of data that have been encoded for the security association.
Encoded Errors	The number of errors that occurred while the packets were being encoded.
Decoded	The number of packets and bytes of data that have been decoded for the security association.
Decoded Errors	The number of errors that occurred while the packets were being decoded.
Authentication Errors	The number of errors that occurred during authentication.
Replay Errors	The number of replay errors that occurred.
Too short Errors	The number of too short errors that occurred.

Field	Description
IPSec SA	
Diffie-Hellman Group	The number of the Diffie-Hellman group to which the security association belongs.
Outbound esp sas	
spi	The Security Parameter Index (SPI) of the outbound ESP security association.
transform	
hmac	The keyed-Hash Message Authentication Code used for the outbound ESP security association, which can be: • sha1-96 • md5-96
cipher	The cipher used for the outbound ESP security association, which can be: • null • des • 3des • aes-cbc-128 • aes-cbc-256
negotiated soft lifetime (kb/sec)	The soft lifetime in kilobits and/or seconds for the outbound ESP security association, created when a successful rekey has occurred. The soft lifetime is used to warn that the security association is about to expire, allowing the security gateway to create a new lifetime prior to the expiration of the hard lifetime.
remaining soft lifetime (kb/sec)	The remaining soft lifetime in kilobits and/or seconds.
negotiated hard lifetime (kb/sec)	The hard lifetime in kilobits and/or seconds for the outbound ESP security association. The hard lifetime is the number of kilobits and/or seconds used before the security association expires.
remaining hard lifetime (kb/sec)	The remaining hard lifetime in kilobits and/or seconds.
Encoded	The number of encoded packets and bytes of data for the outbound ESP security association.
Encoded Errors	The number of errors that occurred while the packets were being encoded.
Inbound esp sas	
spi	The Security Parameter Index (SPI) of the inbound ESP security association.
transform	
hmac	The keyed-Hash Message Authentication Code used for the inbound ESP security association, which can be: • sha1-96 • md5-96

Field	Description
cipher	The cipher used for the inbound ESP security association, which can be: • null • des • 3des • aes-cbc-128 • aes-cbc-256
negotiated soft lifetime (kb/sec)	The soft lifetime in kilobits and/or seconds for the inbound ESP security association, created when a successful rekey has occurred. The soft lifetime is used to warn that the security association is about to expire, allowing the security gateway to create a new lifetime prior to the expiration of the hard lifetime.
remaining soft lifetime (kb/sec)	The remaining soft lifetime in kilobits and/or seconds.
negotiated hard lifetime (kb/sec)	The hard lifetime in kilobits and/or seconds for the inbound ESP security association. The hard lifetime is the number of kilobits and/or seconds used before the security association expires.
remaining hard lifetime (kb/sec)	The remaining hard lifetime in kilobits and/or seconds.
Decoded	The number of packets and bytes of data that have been decoded for the inbound ESP security association.
Decoded Errors	The number of errors that occurred while the packets were being decoded.
Authentication Errors	The number of errors that occurred during authentication.
Replay Errors	The number of replay errors that occurred.
Too short Errors	The number of too short errors that occurred.

show crypto ipsec security-associations statistics

Table 193. show crypto ipsec security-associations statistics Command Output Descriptions

Field	Description
Map Name	The name of the crypto map for which statistics are being displayed.
Application Map Name	The application map name that concatenates the following: • Application Supported: MIP or L2TP • Local Address: The IP address of the interface on the system facilitating the security association (SA). • Peer Address: The IP address of the peer security gateway facilitating the SA. • Traffic Type: Control, GRE encapsulated data, or IPIP (IP-in-IP) encapsulated data NOTE: When a crypto map does not have any IPSec SAs established yet, i.e. No IKE negotiation has taken place OR the tunnel had been brought down after inactivity during the entire lifetime of the SAs, is marked as "Security Association is not established!"
local addr	The IP address of the interface on the system facilitating the security association (SA).
ACL	For ISAKMP or manual crypto maps, this is the name of the access control list (ACL) that is matched to the crypto map.
current peer	The IP address of the peer security gateway facilitating the SA.
Tunnel is keyed 1 times.	The number of times the tunnel was keyed. In this example, the tunnel was keyed once.
Encoded	The number of packets and bytes that have been encoded for the SA.
Encode Errors	The number of errors that have occurred while encoding packets.
Decoded	The number of packets and bytes that have been decoded for the SA.
Decode Errors	The number of errors that have occurred while decoding packets.
Authentication Errors	The number of errors that occurred during the system/security gateway authentication process.
Replay Errors	The number of replay errors that occurred for the SA.
outbound esp sas	
spi	The outbound (from the system to the security gateway) security parameter index (SPI) used for the Encapsulating Security Payload protocol.
transform	The protocols configured for the transform set used by the crypto map for outbound tunnels.
negotiated soft lifetime (kb/sec)	The soft lifetime negotiated by the system and the security gateway for outbound SAs. The lifetime is measured in terms kilobytes (kb) and/or seconds (sec). The soft lifetime is used to warn that the SA is about to expire allowing the systems to negotiate a new lifetime prior to the expiration of the hard lifetime.
remaining soft lifetime (kb/sec)	The amount of kilobytes and/or seconds remaining to the soft lifetime from what was initially negotiated.

Field	Description
negotiated hard lifetime (kb/sec)	The hard lifetime negotiated by the system and the security gateway for outbound SAs. The lifetime is measured in terms kilobytes (kb) and/or seconds (sec). The hard lifetime that dictates the maximum duration for the SA before its termination.
remaining hard lifetime (kb/sec)	The amount of kilobytes and/or seconds remaining to the hard lifetime from what was initially negotiated.
Encoded	The number of packets and bytes that have been encoded for the SA.
Encode Errors	The number of errors that have occurred while encoding packets.
inbound esp sas	
spi	The inbound (from the system to the security gateway) security parameter index (SPI) used for the Encapsulating Security Payload protocol.
transform	The protocols configured for the transform set used by the crypto map for inbound tunnels.
negotiated soft lifetime (kb/sec)	The soft lifetime negotiated by the system and the security gateway for inbound SAs. The lifetime is measured in terms kilobytes (kb) and/or seconds (sec). The soft lifetime is used to warn that the SA is about to expire allowing the systems to negotiate a new lifetime prior to the expiration of the hard lifetime.
remaining soft lifetime (kb/sec)	The amount of kilobytes and/or seconds remaining to the soft lifetime from what was initially negotiated.
negotiated hard lifetime (kb/sec)	The hard lifetime negotiated by the system and the security gateway for inbound SAs. The lifetime is measured in terms kilobytes (kb) and/or seconds (sec). The hard lifetime that dictates the maximum duration for the SA before its termination.
remaining hard lifetime (kb/sec)	The amount of kilobytes and/or seconds remaining to the hard lifetime from what was initially negotiated.
Decoded	The number of packets and bytes that have been decoded for the SA.
Decode Errors	The number of errors that have occurred while decoding packets.
Authentication Errors	The number of errors that occurred during the system/security gateway authentication process.
Replay Errors	The number of replay errors that occurred for the SA.
Too Short Errors	The number of too short errors that occurred for the SA.
ISAKMP sessions established for this tunnel	The total number of sessions successfully connected by this SA.
ISAKMP sessions failed for this tunnel	The total number of sessions that failed to be connected by this SA.
ISAKMP for this tunnel	NOTE: These items are displayed for the life of the ISAKMP SA.
Phase1 Completed as Responder	Indicates the state of the Phase 1 IPSec negotiation stage and role of the system (either responder or initiator).
Statistics	Displays statistics for the ISAKMP SA.
IN	The number of packets/bytes received.
OUT	The number of packets/bytes transmitted.

Field	Description
1 Phase2 negotiations	The number of negotiations that have taken place in Phase 2.
Negotiated Hard lifetime	The hard lifetime negotiated by the system and the security gateway for inbound SAs. The lifetime is measured in terms kilobytes (kb) and/or seconds (sec). The hard lifetime that dictates the maximum duration for the SA before its termination.

show crypto ipsec security-associations summary

Table 194. show crypto ipsec security-associations summary Command Output Descriptions

Field	Description
vvv	The first value (v) indicates the state of the security association (SA State), which can be: • E: Established • P: Partially Established • N: No SAs The second value (v) indicates the state of rekeying (Rekey/Keepalive), which can be: • D: Rekey Disabled • E: Rekey Enabled/No Keepalive • K: Rekey Enabled/Keepalive The third value (v) indicates the type of crypto map (Crypto Type) facilitating the security association, which can be: • D: Dynamic Map • I: IKEv1 Map • J: IKEv2 Map • M: Manual Map
Map Name	The name of the crypto map facilitating the security association.
Rekeys	The number of rekeys that occurred for the security association.
En Pkts	The number of packets that have been encrypted and transmitted over the security association.
De Pkts	The number of packets that have been received over the security association and decrypted.

show crypto isakmp keys

Table 195. show crypto isakmp keys Command Output Descriptions

Field	Description
Peer IP Address	The IP address of the security gateway(s).
Preshared Key	The pre-shared key(s) (in Hex) exchanged by the security gateway.

show crypto isakmp security-associations

Table 196. show crypto isakmp security-associations Command Output Descriptions

Field	Description
Local IPSec GW	The IP address of the local IPSec gateway.
Remote IPSec GW	The IP address of the remote IPSec gateway.
State	This displays the state of the SA. The two letters at the beginning of the state define the IKE mode as follows: • MM - Main Mode • QM - Quick Mode • AM - Aggressive Mode The letter in parentheses () at the end of the state, describe where the state message was initiated as follows: • I - Initiator • R - Responder
Lifetime	The lifetime (time) the security association is active and amount of time remaining.

show crypto managers

Table 197. show crypto managers Command Output Descriptions

Field	Description
Total IKEv2 Invalid-MsgId Notify Sent	An invalid KE Payload was received and the receiver sent back a NOTIFY payload to indicate this. This is the number of times a NOTIFY payload was sent to indicate this error condition.
Total IKEv2 Invalid-MsgId Notify Received	A NOTIFY Payload was received indicating that the KE which had been previously sent to the peer was deemed invalid by the peer.
Total IKEv2 Invalid-KE Notify Sent	An IKE packet was received for which the message-id is invalid. A NOTIFY payload was sent to the peer to indicate that the received message-id was invalid. This maintains the count of the number of times that such a NOTIFY payload was sent.
Total IKEv2 Invalid-KE Notify Received	A NOTIFY payload was received indicating that the message-id which had been previously sent to the peer was deemed invalid by the peer.
Total IKEv2 No-Prop-Chosen Notify Sent	The receiver could not accept the protocol proposal which was sent. A NOTIFY payload was sent back to indicate this. This maintains the count of the number of times such a NOTIFY payload was sent.
Total IKEv2 No-Prop-Chosen Notify Received	A NOTIFY payload was received indicating that the proposals which had been previously sent to the peer could not be accepted.

show crypto managers instance

Table 198. show crypto managers instance Command Output Descriptions

Field	Description
IKEv2 DoS Cookie-Challenge Status	Denial of Service status. - On - Off
Certificate Information	For non-expired certificates: - Serial number: <i><string></i> - Monitoring Timer: Running - Status: Not Expired - Next Timer <i><datetime></i> - Expiry: <i><datetime></i> For expired certificates - Serial number: <i><string></i> - Monitoring Timer: Stopped - Status: Expired - Next Timer: Not Scheduled - Expiry: <i><datetime></i>
IKEv2 Statistics	This displays the IKEv2 statistics for this manager instance
Current IKEv2 SAs	The total number of all IKEv2 SAs for this manager instance
Current half-open IKEv2 SAs	The number of IKEv2 SAs in half-open state for this manager instance
Current Connecting IKEv2 SAs	The number of IKEv2 SAs trying to connect for this manager instance
Current Established IKEv2 SAs	The number of established IKEv2 SAs for this manager instance
Internal Failure Sent	Indicates an internal failure in ipsecmgr or dcadmgr and a Notify message was sent to the peer.

show crypto managers summary

Table 199.show crypto managers summary Command Output Descriptions

Field	Description
demux-stats	Display sessions demux statistics on each IPsec Manager.
distribution	Display IPsec Manager distribution info.
handoff-stats	Display IKE request handoff Statistics on each IPsec Manager.
ike-stats	Display IKE statistics on each IPsec Manager.
ikev2-stats	Display IKEv2 statistics on each IPsec Manager.
ipsec-sa-stats	Display IPsec SA statistics on each IPsec Manager.

show crypto map summary

Table 200. show crypto map summary Command Output Descriptions

Field	Description
Total Crypto maps	The total number of crypto maps of all types.
Configured maps	The total number of configured crypto maps.
Service maps	The total number of service maps. There is one map per service.
Subscriber maps	The total number of subscriber maps.
Map Types	
ipsec-dynamic	The total number of dynamic IPsec tunnel crypto maps.
ipsec-L2tp	The total number of L2TP IPsec tunnel crypto maps.
ipsec-ikev1	The total number of IKEv1 IPsec tunnel crypto maps.
ipsec-manual	The total number of manual (static) IPsec tunnel crypto maps.
ipsec-ikev2-subscriber	The total number of IKEv2 subscriber tunnel crypto maps.
ipsec-mobile-ip	The total number of mobile IP IPsec tunnel crypto maps.
IKEv2 SA	
Cipher null	The total number of IKEv2 security associations using the block cipher NULL. All IKEv2 security association protected traffic is sent in the clear.
Cipher des	The total number of IKEv2 security associations using the block cipher Data Encryption Standard in Cypher Block Chaining (CBC) mode.
Cipher 3des	The total number of IKEv2 security associations using the block cipher Triple Data Encryption Standard in Cypher Block Chaining (CBC) mode.
Cipher aes-cbc-128	The total number of IKEv2 security associations using the block cipher Advanced Encryption Standard with a 128-bit key in Cypher Block Chaining (CBC) mode.
Cipher aes-cbc-256	The total number of IKEv2 security associations using the block cipher Advanced Encryption Standard with a 256-bit key in Cypher Block Chaining (CBC) mode.
PRF sha1	The total number of IKEv2 security associations using the IKE pseudo-random function (PRF) with the cryptographic hash function Secure Hash Algorithm-1.
PRF md5	The total number of IKEv2 security associations using the IKE pseudo-random function (PRF) with the cryptographic hash function Message Digest 5.
HMAC sha1	The total number of IKEv2 security associations using a keyed-Hash Message Authentication Code (HMAC) with the cryptographic hash function Secure Hash Algorithm-1 truncated to 96 bits.

Field	Description
HMAC md5	The total number of IKEv2 security associations using a keyed-Hash Message Authentication Code (HMAC) with the cryptographic hash function Message Digest 5 truncated to 96 bits.
DH Group 1	The total number of IKEv2 security associations using Diffie-Hellman Group 1 security (the lowest security level). DH Group 1 provides 768 bits of key exchange cryptographic strength. This is a modular exponential (MODP) DH group.
DH Group 2	The total number of IKEv2 security associations using Diffie-Hellman Group 2 security. DH Group 2 (the default) provides 1024 bits of key exchange cryptographic strength. This is a modular exponential (MODP) DH group.
DH Group 5	The total number of IKEv2 security associations using Diffie-Hellman Group 5 security. DH Group 5 provides 1536 bits of key exchange cryptographic strength. This is a modular exponential (MODP) DH group.
DH Group 14	The total number of IKEv2 security associations using Diffie-Hellman Group 14 security (the highest security level). DH Group 14 provides 2048 bits of key exchange cryptographic strength. This is a modular exponential (MODP) DH group.
IPSec SA	
Protocol esp	The total number of IPsec security associations using Encapsulating Security Payload (ESP) protocol.
Protocol ah	The total number of IPsec security associations using Authentication Header (AH) protocol.
Cipher null	The total number of IPsec security associations using the block cipher NULL. All IKEv2 IPsec security association derived traffic is sent in the clear.
Cipher des	The total number of IPsec security associations using the block cipher Data Encryption Standard in Cypher Block Chaining (CBC) mode.
Cipher 3des	The total number of IPsec security associations using the block cipher Triple Data Encryption Standard in Cypher Block Chaining (CBC) mode.
Cipher aes-cbc-128	The total number of IPsec security associations using the block cipher Advanced Encryption Standard with a 128-bit key in Cypher Block Chaining (CBC) mode.
Cipher aes-cbc-256	The total number of IPsec security associations using the block cipher Advanced Encryption Standard with a 256-bit key in Cypher Block Chaining (CBC) mode.
HMAC sha1-96	The total number of IPsec security associations using a keyed-Hash Message Authentication Code (HMAC) with the cryptographic hash function Secure Hash Algorithm-1 truncated to 96 bits (the default).
HMAC md5-96	The total number of IPsec security associations using a keyed-Hash Message Authentication Code (HMAC) with the cryptographic hash function Message Digest 5 truncated to 96 bits.
DH Group 1	The total number of IPsec security associations using Diffie-Hellman Group 1 security (the lowest security level). DH Group 1 provides 768 bits of key exchange cryptographic strength. This is a modular exponential (MODP) DH group.
DH Group 2	The total number of IPsec security associations using Diffie-Hellman Group 2 security. DH Group 2 (the default) provides 1024 bits of key exchange cryptographic strength. This is a modular exponential (MODP) DH group.
DH Group 5	The total number of IPsec security associations using Diffie-Hellman Group 5 security. DH Group 5 provides 1536 bits of key exchange cryptographic strength. This is a modular exponential (MODP) DH group.

Field	Description
DH Group 14	The total number of IPsec security associations using Diffie-Hellman Group 14 security (the highest security level). DH Group 14 provides 2048 bits of key exchange cryptographic strength. This is a modular exponential (MODP) DH group.

show crypto statistics

Table 201. show crypto statistics Command Output Descriptions

Field	Description
Combined ipsec statistics for context <context-name>	The name of the system context for which statistics are displayed.
Transmit Statistics	
ESP Encode	The total number of packets and bytes that were transmitted having been encoded for the SA using the Encapsulating Security Payload (ESP) protocol.
AH Encode	The total number of packets and bytes that were transmitted having been encoded for the SA using the Authentication Header (AH) protocol.
Transmit Error Counters	
Encode Packets	The total number of packets which have errors while encoding.
Encode Bytes	The total number of bytes which have errors while encoding.
Receive Statistics	
ESP Decode	The total number of packets and bytes that were received having been encoded for the SA using the Encapsulating Security Payload (ESP) protocol.
AH Decode	The total number of packets and bytes that were received having been encoded for the SA using the Authentication Header (AH) protocol.
Receive Error Counters	
Decode Packets	The total number of packets which have errors while decoding.
Decode Bytes	The total number of bytes which have errors while encoding.
Replay Packets	The total number of packets which have been replayed.
Replay Bytes	The total number of bytes which have been replayed.
Combined Control Statistics for Context	The name of the system context for which statistics are displayed.
IKE Flow Counts	
IKE Gateway Flows	The number of UDP flows, incremented when UDP flows are allocated and decremented when UDP flows are freed.
IKE Session Flows	The number of cookie flows, incremented when cookie flows are allocated and decremented when cookie flows are freed.
Transmit Statistics	
IKE Packets	The total number of total IKE packets transmitted.
Receive Statistics	

Field	Description
IKE Packets Received	The total number of IKE packets received.
New IKE Req	The total number of IKE packets sent for new IKE requests.
Gateway Flow Packets	The total number of UDP flow packets received.
Session Flow Packets	The total number of cookie flow packets received.
Rekey Statistics	
IKE Rekeys	The total number of times the IKE SAs negotiated during phase 1 of the IPSec negotiation have been rekeyed. This field is for IKEv1 only and it will be 0 for IKEv2.
Dead Peer Detection (DPD) Statistics	
Req Sent	The total number of DPDR-U-THERE packets sent.
Rsp Rcvd	The total number of DPDR-U-THERE-ACK packets received.
Req Rcvd	The total number of DPDR-U-THERE packets received.
Rsp Sent	The total number of DPDR-U-THERE-ACK packets sent.
Disconnects	The total number of DPD disconnects that occurred between the peers.
Timeouts	The total number of ISAKMP DPD protocol messages that have exceeded their configured timeout period.
NAT-T Statistics	
Keepalives Sent	The total number of NATT keepalive packets sent.
Keepalives Rcvd	The total number of NATT keepalive packets received.
Detailed IKE Statistics	
Active IKE SAs	The total number of SAs: • Initiated • Responded.
Total IKE SAs	The total number of SAs (cumulative history): • Initiated • Responded.
Total Attempts	The total cumulative attempts made to establish SAs: • Initiated • Responded.
Total IKE SA Deletes	• Req Sent • Rsp Rcvd • Req Rcvd • Rsp Sent
Total Packets In	The total cumulative IKE packets received.

Field	Description
Total Packets Out	The total cumulative IKE packets sent.
Total Octets In	The total cumulative IKE octets received.
Total Octets Out	The total cumulative IKE octets sent.
Establishment Failure Statistics	
InitiationNeg Error	The total number of initiated negotiations that failed because of errors.
InitiationNeg Time Out	The total number of initiated negotiations that failed because of timeouts (no response).
Response Neg Error	The total number of responded negotiations that failed because of errors.
Congestion Reject	The total number of packets which were rejected due to congestion control.
Congestion Drop	The total number of packets which were dropped due to congestion control.
Total Cookie Error	Total errors in cookie challenge. Refer to the detailed counters in IKEv2 section.
IKEv2 Statistics	
Current state:	• Current IKEv2 SAs • Current half-open IKEv2 SAs • Current connecting IKEv2 SAs • Current established IKEv2 SAs • Current child SAs
IKEv2 Timer Stats	• Total IKESA Retrans expirations • Total IKESA Setup expirations (no exchange) • Total IKESA Setup expirations • Total IKESA Lifetime (soft) expirations • Total IKESA Lifetime (hard) expirations • Total TSELSA Lifetime (soft) expirations • Total TSELSA Lifetime (hard) expirations
IKEv2 Exchanges dropped	• Total IKEv2 Resp Pkts Drop - No IKESA • Total invalid resp • Total non-initexch drop--no IKESA • Total invalid message ID • Total invalid major version • Total IKESA error • Total unknown critical payload

Field	Description
IKEv2 Cookie Statistics	• Total cookie notify packets sent • Total cookie notify packets received • Total cookie notify match • Total cookie notify not match
IKEv2 Rekey Statistics	• Total IKESA Rekey sent • Total IKESA Rekey received • Total IKESA Rekey ignored • Total ChildSA Rekey sent • Total ChildSA Rekey received • Total ChildSA Rekey ignored
IKEv2 MOBIKE Statistics	• Total MOBIKE notify sent • Total MOBIKE received • Total Mobike ignored
IKEv2 Misc Statistics	• Total SA create failure • Total SA flow operation failure • Total NAT Keepalive received • Total Invalid-KE notify sent • Total Invalid-KE notify received • Total Invalid-msgID notify received • Total No-Prop-Chosen notify sent • Total No-Prop-Chosen notify received

Field	Description
IKEv2 Exchange Decode failure statistics	• Total pkts failure • Total internal errors • Total invalid IP HDR • Total invalid UDR HDR • Total invalid IKE HDR • Total invalid IKE HDR payload • Total invalid IKE HDR MJ ve • Total invalid IKE HDR MN verr • Total invalid IKE HDR exchange type • Total invalid IKE HDR Rsvd flag • Total invalid IKE HDR length • Total invalid payload syntax • Total invalid payload len • Total unknown crit payload • Total too many payloads • Total invalid SA payload len • Total invalid SA proposal HDR • Total invalid SA proposal HDR Reserved • Total too many transforms • Total invalid SA proposal HDR len • Total too many proposals • Total invalid protocol ID • Total invalid first SA proposal num • Total invalid SA proposal num • Total invalid transform len • Total invalid transform HDR • Total invalid transform HDR Rsvd • Total invalid transform type • Total invalid transform ID

Field	Description
IKEv2 Exchange Decode failure statistics (continued)	• Total invalid KE payload len • Total invalid KE DH Group len • Total invalid ID payload type • Total invalid ID payload len • Total invalid KE DH group • Total invalid KE DH groups • Total invalid Transform ID • Total invalid auth payload len • Total invalid nonce payload len • Total invalid notify payload len • Total invalid notify payload SPI size • Total Invalid Notify payload Proto ID • Total invalid notify payload NATT • Total invalid notify payload Cookie • Total Invalid notify payload Rekey • Total invalid notify payload NATT • Total invalid notify payload Cookie • Total invalid notify payload Rekey • Total invalid EAP payload len • Total invalid CP payload len • Total invalid CP payload attr len • Total invalid payload unknown attr • Total invalid Encrypted Payload len • Total invalid TS payload len • Total invalid TS payload Rsvd • Total invalid TS payload TS-type • Total unsupported crit payload • Total unsupported cert payload • Total unsupported Auth method

Field	Description
IKEv2 Exchange Decode failure statistics (continued)	• Total unsupported SA payload Prot AH • Total unsupported Notify Prot AH • Total unsupported payload Crit VID • Total unsupported TS payload TS_Type • Total unsupported method • Total unknown error
IKEv2 Decrypt Failure statistics	• Total Pkts failure • Total HMAC mismatch • Total pad length error
IKEv2 Xchg statistics	• Total Bad Msg ID • Total bad response • Total stale message ID • Total unknown error • Total state lookup failure

show crypto statistics ikev2 service-name

Table 202.show crypto statistics IKEv2 service-name Command Output Descriptions

Field	Description
Flow Counts	
Current UDP flows	The total number of UDP port based flows in the data path.
Current Cookie flows	The total number of cookie challenge based flows in the data path.
Transmit Statistics	
IKE Packets	The total number of total IKE packets transmitted.
Receive Statistics	
IKE Packets Received	The total number of IKE packets received.
New IKE Requests	The total number of IKE packets sent for new IKE requests.
UDP flow Packets	The total number of packets that matched the UDP flow.
Cookie flow Packets	The total number of packets that matched the cookie flow.
Rekey Statistics	
IKE Rekeys	The total number of successful IKE_SA rekeys.
Dead Peer Detection (DPD) Statistics	
Requests sent	The total number of DPD R-U-THERE packets sent.
Replies received	The total number of DPD R-U-THERE-ACK packets received.
Requests received	The total number of DPD R-U-THERE packets received.
Replies sent	The total number of DPD R-U-THERE-ACK packets sent.
Collisions	The total number of events that IKEv2 keepalive exchanges occur simultaneously from the PDIF and the MS.
Disconnects	The total number of DPD disconnects that occurred between the peers.
Timeouts	The total number of DPD protocol messages that have exceeded their configured timeout period.
NAT-T Statistics	
Keepalives sent	The total number of NAT-T keepalive packets sent.
Detailed IKE Statistics	
Active IKE SAs	The total number of IKE SAs.
Initiated	The total number of the active SAs initiated locally.

■ show crypto statistics ikev2 service-name

Field	Description
Responded	The total number of the active SAs responded.
Total IKE SAs so far	The total number of SAs (cumulative history).
Initiated	The total cumulative IKE SAs initiated locally.
Responded	The total cumulative IKE SAs responded to.
Total attempts so far	The total cumulative attempts made to establish SAs.
Initiated	The total number of SA establishment attempts initiated locally.
Responded	The total number of SA establishment attempts responded to.
Total deletes so far	The total cumulative deletes so far.
Requests received	The total number of requests received.
Requests sent	The total number of requests sent.
Replies received	The total number of replies received.
Replies sent	The total number of replies sent.
Total packets in	The total cumulative IKEv2 packets received.
Total packets out	The total cumulative IKEv2 packets sent.
Total octets in	The total cumulative IKEv2 octets received.
Total octets out	The total cumulative IKEv2 octets sent.
Failed initiated negotiations with errors	The total number of initiated negotiations that failed because of errors.
Failed initiated negotiations with time out:	The total number of initiated negotiations that failed because of timeouts (no response).
Failed responded negotiations with errors	The total number of responded negotiations that failed because of errors.
Total cookie errors	The total number of cookie errors encountered.
Congestion rejects	The total number of packets rejected due to congestion.
Congestion drops	The total number of packets dropped due to congestion.
Total Unknown Exchange SPI	The total number of unknown exchange SPIs.
IKEv2 Detail Statistics	
Current State	
Current IKEv2 SAs	The number of current IKEv2 SAs.

Field	Description
Current Half-Open IKEv2 SAs	The number of IKEv2 SAs in a half-open state.
Current Connecting IKEv2 SAs	The number of IKEv2 SAs currently connecting.
Current Established IKEv2 SAs	The number of established IKEv2 SAs.
Current Child SAs	The number of current child SAs.
Total IKEv2 Timer Statistics	
IKESA Retrans Expirations	The total number of retransmission expirations.
IKESA Setup Expirations (no Xchg)	The number of IKESA setups that expired with no exchange.
IKESA Setup Expirations	The total number of IKESA Session setups expired.
IKESA Lifetime (Soft) Expirations	The number of IKESA soft lifetime timer expirations.
IKESA Lifetime (Hard) Expirations	The number of IKESA hard lifetime timer expirations.
CHILD_SA Setup Expirations (no Xchg)	The number of Child SA setups that expired with no exchange.
CHILD_SA Lifetime (Soft) Expirations	The number of Child SA soft lifetime timer expirations.
CHILD_SA Lifetime (Hard) Expirations	The number of Child SA hard lifetime timer expirations.
Total IKEv2 Multiple Authentication Statistics	
Phase 1 Auth Successes	The number of multi-auth Phase 1 EAP authentication successes.
Phase 1 Auth Failures	The number of multi-auth Phase 1 EAP authentication failures.
Phase 1 Auth Req Sent	The number of multi-auth Phase 1 EAP authentication requests sent.
Phase 1 Auth Resp Rcvd	The number of multi-auth Phase 1 EAP authentication responses received.
Phase 2 Auth Successes	The number of multi-auth Phase 2 EAP authentication successes.

■ show crypto statistics ikev2 service-name

Field	Description
Phase 2 Auth Failures	The number of multi-auth Phase 2 EAP authentication failures.
Phase 2 Auth Req Sent	The number of multi-auth Phase 2 EAP authentication requests sent.
Phase 2 Auth Resp Rcvd	The number of multi-auth Phase 2 EAP authentication responses received.
Phase 2 Auth MD5 Successes	The number of multi-auth Phase 2 EAP authentication with MD5 successes.
Phase 2 Auth MD5 Failures	The number of multi-auth Phase 2 EAP authentication with MD5 failures.
Phase 2 Auth GTC Successes	The number of multi-auth Phase 2 EAP authentication with GTC mode successes.
Phase 2 Auth GTC Failures	The number of multi-auth Phase 2 EAP authentication with GTC mode failures.
Hash match failures	The number of hash match failures.
Signing failures	The number of signing failures.
MSK missing at phase 1 comp	The number of EAP Master Session Keys (MSK) not found.
Miss Another Auth Follows	The number of missed authentications that follow.
Total IKEv2 Exchanges Dropped	
Resp Pkts Drop - No IKESA	The number of IKEv2 response packets dropped without an IKEv2 SA being created.
Invalid Resp	The total number of invalid response messages.
Non-Init Exch Drop - No IKESA	The total number of IKEv2 exchanges dropped without an IKEv2 SA being created.
Invalid MSG ID	The total number of sessions dropped due to packets with invalid MSG ID.
Invalid Major Version	The total number of sessions dropped due to packets with invalid major version.
IKESA error	The total number of IKESA error messages.
Unknown Crit Payload	The total number of unknown critical payload messages.
Retransmitted request	IKEV2 Stack does not process the packets in the order they are received. New packets are queued if any packet is under processing. After completing the processing, stack consider processing the packets queue first instead of taking the latest packet received from network directly and leaving the packets in queue for later. And if any message is received with same message ID which is currently under processing, then that message will be discarded as retransmitted message received. The count for such request is 'Retransmitted Request'.
Total IKEv2 Notify Statistics	

Field	Description
CookieNotify Sent	The total number of IKEv2 Denial of Service (DoS) cookie notify packets sent.
CookieNotify Received	The total number of IKEv2 DoS cookie notify packets received.
CookieNotify Match	The total number of IKEv2 DoS cookie notify messages that match.
CookieNotify Not Match	The total number of IKEv2 DoS cookie notify messages that do not match.
Multi Auth Supported	The total number of multiple authentications supported.
Another Auth Follows	The total number of authentications that follow.
Total IKEv2 Rekey Statistics	
IKESA Rekey Sent	The total number of IKESA Rekey Request messages sent.
IKESA Rekey Rcvd	The total number of IKESA Rekey Request messages received.
IKESA Rekey Ignored	The total number of IKESA Rekey messages ignored.
ChildSA Rekey Req Sent	The total number of Child SA Rekey Request messages sent.
ChildSA Rekey Req Rcvd	The total number of Child SA Rekey Request messages received.
ChildSA Rekey Rsp Sent	The total number of Child SA Rekey Response messages sent.
ChildSA Rekey Rsp Rcvd	The total number of Child SA Rekey Response messages received.
ChildSA Rekey Ignored	The total number of Child SA Rekey messages ignored.
Total IKEv2 MOBIKE Statistics	
MOBIKE Notify Sent	The total number of MOBIKE notify messages sent. MOBIKE is not supported. All MOBIKE messages are treated as if they were never received.
MOBIKE Recvd	The total number of MOBIKE packets received.
MOBIKE Ignored	The total number of MOBIKE packets dropped.
Total IKEv2 Misc Statistics	
SA Create Failure	The total number of SA creations failed.
SA Flow Operation Failure	The total number of SA flow operations failed.
Total IKEv2 Notify Payload Sent Statistics	
Invalid KE Payload	The total number of IKEv2 NOTIFY payloads sent of the NOTIFY type Invalid KE Payload.

■ show crypto statistics ikev2 service-name

Field	Description
Invalid Major Version	The total number of IKEv2 NOTIFY payloads sent of the NOTIFY type Invalid Major Version.
Invalid Message ID	The total number of IKEv2 NOTIFY payloads sent of the NOTIFY type Invalid Message ID.
Invalid Syntax	The total number of IKEv2 NOTIFY payloads sent of the NOTIFY type Invalid Syntax.
No Additional SAs	The total number of IKEv2 NOTIFY payloads sent of the NOTIFY type No Additional SAs.
No Proposal Chosen	The total number of IKEv2 NOTIFY payloads sent of the NOTIFY type No Proposal Chosen.
TS Unacceptable	The total number of IKEv2 NOTIFY payloads sent of the NOTIFY type TS Unacceptable.
Unsupported Critical Payload	The total number of IKEv2 NOTIFY payloads sent of the NOTIFY type Unsupported Critical Payload.
Internal Failure Sent	The total number of IKEv2 NOTIFY payloads sent of the NOTIFY type Internal Failure Sent.
Total IKEv2 Notify Payload Received Statistics	
Invalid KE Payload	The total number of IKEv2 NOTIFY payloads received of the NOTIFY type Invalid KE Payload.
Invalid Major Version	The total number of IKEv2 NOTIFY payloads received of the NOTIFY type Invalid Major Version.
Invalid Message ID	The total number of IKEv2 NOTIFY payloads received of the NOTIFY type Invalid Message ID.
Invalid Syntax	The total number of IKEv2 NOTIFY payloads received of the NOTIFY type Invalid Syntax.
No Additional SAs	The total number of IKEv2 NOTIFY payloads received of the NOTIFY type No Additional SAs.
No Proposal Chosen	The total number of IKEv2 NOTIFY payloads received of the NOTIFY type No Proposal Chosen.
TS Unacceptable	The total number of IKEv2 NOTIFY payloads received of the NOTIFY type TS Unacceptable.
Unsupported Critical Payload	The total number of IKEv2 NOTIFY payloads received of the NOTIFY type Unsupported Critical Payload.
IKEv2 Exchange Decode Failure Statistics	
Packet Failures	The number of IKEv2 packets that fail to decode.
Internal Errors	The total number of failures due to internal errors.
Invalid IP HDR	The total number of failures due to an invalid IP header.
Invalid UDP HDR	The total number of failures due to an invalid UDP header.
Invalid IKE HDR	The total number of failures due to an invalid IKE header.
Invalid IKE HDR Payload	The total number of failures due to an invalid IKE header payload.
Invalid IKE HDR Init SPI	The total number of failures due to an invalid IKE header initiator security parameter index.
Invalid IKE HDR Resp SPI	The total number of failures due to an invalid IKE header responder security parameter index.
Invalid IKE HDR Major Ver	The total number of failures due to an invalid IKE header major version.

Field	Description
Invalid IKE HDR Minor Ver	The total number of failures due to an invalid IKE header minor version.
Invalid IKE HDR Xchg Type	The total number of failures due to an invalid IKE header exchange type.
Invalid IKE HDR Rcvd Flag	The total number of failures due to an invalid IKE header received flags.
Invalid IKE HDR Len	The total number of failures due to an invalid IKE header length.
Invalid Syntax	The total number of failures due to an invalid syntax.
Invalid Payload Syntax	The total number of failures due to an invalid payload syntax.
Invalid Payload Len	The total number of failures due to an invalid payload length.
Unknown Crit Payload	The total number of failures due to an unknown critical payload.
Too many payloads	The total number of failures due to many payloads.
Invalid SA Payload Len	The total number of failures due to an invalid SA payload length.
Invalid SA Proposal HDR	The total number of failures due to an invalid SA proposal header.
Invalid SA Proposal HDR Rcvd	The total number of failures due to an invalid SA proposal header received.
Too many transforms	The total number of failures due to many transform-sets in the SA payload.
Invalid SA Proposal HDR Len	The total number of failures due to an invalid SA proposal header length.
Too many proposals	The total number of failures due to many proposals in SA payload.
Invalid first SA Proposal num	The total number of failures due to an invalid first SA proposal number.
Invalid SA Proposal ID	The total number of failures due to an invalid Protocol ID in SA payload.
Invalid SA Proposal num	The total number of failures due to an invalid SA proposal number.
Invalid Transform Len	The total number of failures due to an invalid transform-set length.
Invalid Transform HDR	The total number of failures due to an invalid transform-set header.
Invalid Transform HDR Rcvd	The total number of failures due to an invalid transform-set header received.

Field	Description
Invalid Transform Type	The total number of failures due to an invalid transform-set type.
Invalid Transform ID	The total number of failures due to an invalid transform-set ID.
Invalid KE Payload Len	The total number of failures due to an invalid key exchange payload length.
Invalid KE DH Group	The total number of failures due to an invalid key exchange Diffie-Hellman group number.
Invalid KE DH Group Len	The total number of failures due to an invalid ID payload length.
Invalid ID Pld Len	The total number of failures due to an invalid ID payload length.
Invalid ID Pld Type	The total number of failures due to an invalid ID payload type.
Invalid ID Pld Data	The total number of packets for which ID payload syntax validation has failed.
Invalid Nonce Payload Len	The total number of failures due to an invalid nonce payload length.
Invalid Notify Payload Len	The total number of failures due to an invalid notify payload length.
Invalid Notify Payload SPI Len	The total number of failures due to an invalid notify payload security parameter index size.
Invalid Notify Payload NAT	The total number of failures due to an invalid notify payload Network Address Translation -Traversal.
Invalid Notify payload Proto Id	The total number of failures due to an invalid notify payload protocol ID.
Invalid EAP Payload len	The total number of failures due to an invalid Encapsulation Authentication Protocol payload length.
Invalid Notify Payload Rekey	The total number of failures due to an invalid notify payload rekey.
Invalid CP Payload len	The total number of failures due to an invalid CP payload length.
Invalid Notify Payload Cookie	The total number of failures due to an invalid notify payload cookie.
Invalid TS Payload len	The total number of failures due to an invalid transform-set payload length.
Invalid CP Payload Attr Len	The total number of failures due to an invalid CP payload unknown attribute length.
Invalid TS Payload Rcvd	The total number of failures due to an invalid transform-set payload received.
Invalid Encrypted Payload Len	The total number of failures due to an invalid encrypted payload length.

Field	Description
Invalid TS payload TS-Type	The total number of failures due to an invalid transform-set payload transform-set type.
Unsupported Crit Payload	The total number of failures due to an unsupported critical payload.
Unsupported Cert Payload	The total number of failures due to an unsupported certified payload.
Unsupported Notify Prot AH	The total number of failures due to an unsupported notify payload protocol Authentication Header.
Unsupported Auth method	The total number of failures due to an unsupported authentication method.
Unsupported Payload Crit VID	The total number of failures due to an unsupported payload critical V-LAN ID.
Unsupported method	The total number of failures due to an unsupported method.
Unknown Error	The total number of failures due to an unknown error.
Unsupported SA Payload Prot AH	The total number of failures due to an unsupported SA payload protocol Authentication Header.
Unsupported TS payload TS-Num	The total number of failures due to an unsupported transform-set payload number.
Unsupported TS Payload TS-Type	The total number of failures due to an unsupported transform-set payload transform-set-type.
Unsupported TS Payload TS-Prot	The total number of failures due to an unsupported transform-set payload protocol.
Unsupported CP Payload No IP Attr	The total number of failures due to an invalid CP because of no available IP attribute.
Invalid CP Payload UNK ATTR	The total number of failures due to an invalid CP because of an unknown attribute.
Total IKEv2 Decrypt Failure Statistics	
Packets Failure	The total number of session failures due to packets that failed to decrypt.
HMAC mismatch	The total number of session failures due to a HMAC mismatch.
Pad length error	The total number of failures due to a pad length error in the packet.
Total IKEv2 Xchg Statistics	
Bad Msg Id	The total number of session failures due to a bad message ID.
Bad Response	The total number of session failures due to a bad response.
Stale Msg ID	The total number of session failures due to a stale message ID.
Unknown error	The total number of session failures due to unknown errors.
Stale Lookup Failure	The total number of session failures due to a stale lookup failure.

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■ show crypto statistics ikev2 service-name
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Field	Description
Combined Crypto map Statistics	
Current Tunnels	The number of tunnels currently connected by the SA.
Current Tunnels Established	The number of tunnels successfully connected by the SA.
IKE Fails	The total number of tunnels that failed to be connected by the SA.
Total Tunnels	The total number of tunnels connected by the SA.
Total Tunnels Established	The total number of tunnels successfully connected by the SA.
Call Req Rejects	The total number of call request reject messages.

Chapter 87

show cs-network

This chapter includes the **show cs-network** command output tables.

show cs-network all status

Table 203. show cs-network all status Command Output Descriptions

Field	Description
CS Network name	Indicates the name of the Circuit Switched (CS) network instance for which status is displayed.
Associated SCCP-Network	Indicates the name of the Signalling Connection Control Part (SCCP) network service instance which is associated with the referenced CS network instance.
Associated Alcap-Service	Indicates the name of the Access Link Control Application Protocol (ALCAP) service instance which is associated with the referenced CS network instance.
Alcap Context Name	Indicates the name of the context in which ALCAP service instance is configured.
Associated RTP Pool	Indicates the name of the RTP IP pool configured and associated with the referenced CS network instance for RTP stream management.
RTP Pool Context Name	Indicates the name of the context in which RTP IP pool is configured for RTP stream management.
MSC Point Code	Indicates the address of MSC in SS7 point code notation which is serving the referenced CS network instance.
Status	Indicates the status of MSC which is serving the referenced CS network instance.
Network Status	Indicates the status of network in which the referenced CS network instance is placed.
RTP IP Addresses	Indicates the session manager instances and associated IP pools with them for RTP stream management support.
NRI	Indicates the Network Resource Identification (NRI) bit configuration status for the referenced CS network.
IDNNS	Indicates the Intra-Domain NAS Node Selector (IDNNS) configuration status for the referenced CS network to transport the NRI value.
Lac range <nnn> to <nnn> MSC Point-code <x . x . x>	Indicates the mapping configured between MSC point-code and range of LAC for multiple MSC selection without Iu-Flex in CS network.
CORE NODE MAP	Indicates the core node mapping configuration status for the referenced CS network.
Ranap Reset Ack Timer	The timer value, in seconds, that defines how long the HNB-GW waits for a RESET ACK message from the MSC after transmitting a RESET message. This setting is used only if the HNB-GW Initiated RANAP Reset function is enabled.
Ranap Reset Maximum Retransmissions	Sets the maximum number of retries allowed for the HNB-GW to transmit a RANAP RESET message to the MSC if the RESET ACK timer expires. This setting is used only if the HNB-GW Initiated RANAP Reset function is enabled.
Ranap Reset Guard Timer	The timer that the HNB-GW starts after receiving a RESET message from the CS core network. While this timer is running, the HNB-GW discards any new RESET messages that it receives.
Global RNC-Id	This group displays the information related to global Radio Network Controller settings for use by the CS core network for HNB-GW service(s) on a chassis. It is configured under the PLMN-ID.

Field	Description
MCC	The Mobile Country Code defined for use with this HNB-GW service. It consists of the first 3 digits of the Available Radio Network PLMN ID.
MNC	The Mobile Network Code defined for use with this HNB-GW service. It consists of the last 3 digits of the Available Radio Network PLMN ID.
Id	The Radio Network Controller ID provided to HNBs for use by the CS core network for this HNB-GW service. It is configured under the PLMN-ID

Chapter 88

show cscf

This chapter includes the **show cscf** command output tables.

show cscf nat media mapping all

Table 204. show cscf nat media mapping all Command Output Descriptions

Field	Description
UE-Origin	The IP address and port number of the UE origin.
UE-Destination	The IP address and port number of the UE destination.
Nwk-Origin	The IP address and port number of the network origin.
Nwk-Destination	The IP address and port number of the network destination.
Nwk-Core-context	The context in which the network core configuration resides.
UE-Access-context	The context in which the UE access configuration resides.

show cscf peer-servers full

Table 205. show cscf peer-servers full Command Output Descriptions

Field	Description
Peer-Server name	The name of the peer server group.
Context	The context in which the peer server group configuration resides.
Server type	The type of servers in the peer server group.
Hunting-method	The hunting method used by the servers in the peer server group.
server	The name of the peer server.
Address	The IP address of the peer server expressed in IPv4 or IPv6 dotted decimal notation.
domain	The domain name of the peer server.
Monitor status	The monitoring status of the peer servers as determined by the CLI command Enabled/Disabled.
monitor-interval (seconds)	The time period, in seconds, between monitor intervals.
monitor-message	The SIP message (OPTIONS) to be sent after each monitoring interval.
monitor-response-timer (seconds)	The response wait timer, in seconds, for each monitor message.
Server mode	The mode of the peer server as determined by the CLI command Active/Standby.
Server status	The status of the peer server. Possible statuses are: - OUT_OF_SERVICE — Peer server mode changed to standby through CLI command. - AVAILABLE — Peer server mode is Active and peer server sends response to monitor message. - UNAVAILABLE — Peer server mode is Active, however, peer server does not send response to monitor message.
Network session template	Binds the nw-session-template name with the peer server.
IMS Capable	Indicates if the peer server is ims-capable or not.
RequestRx	The number of requests received by the sip-as peer server from S-CSCF during load balancing.

show cscf service li-packet-cable statistics

Refer to the *ASR 5000 Lawful Intercept Configuration Guide* for descriptions of these statistics.

show cscf service statistics name <service_name> all

Table 206. show cscf service statistics name <service_name> all Command Output Descriptions

Field	Description
CSCF Service	The name of the service and context.
CSCF Active Subscriptions	
Originating	The total current number of active subscriptions originating on this service.
Terminating (UE originated)	The total current number of UE-originated active subscriptions terminating on this service.
Terminating (PCSCF Originated)	The total current number of Proxy CSCF-originated active subscriptions terminating on this service.
Terminating (AS Originated)	The total current number of AS-originated active subscriptions terminating on this service.
Proxied	The total current number of active subscriptions proxied on this service.
CSCF Calls	
Total CallSetupAttempts Rx	The total current number of call setup attempts received by this service.
Total CallSetupAttempts Tx	The total current number of call setup attempts transmitted by this service.
Total CallSetupSuccess Rx	The total current number of successful call setups received by this service.
Total CallSetupSuccess Tx	The total current number of call setups successfully transmitted by this service.
Total CallSetupFailures Rx	The total current number of call setup failures received by this service.
Total CallSetupFailures Tx	The total current number of failed call setups transmitted by this service.
Total 3xx Responses Rx	The total current number of 3xx responses received by this service.
Total 3xx Responses Tx	The total current number of 3xx responses transmitted by this service.
Total 402 Payment Required Rx	The total current number of 402 Payment Required responses received by this service.
Total 402 Payment Required Tx	The total current number of 402 Payment Required responses transmitted by this service.
Total 403 Forbidden Rx	The total current number of 403 Forbidden responses received by this service.
Total 403 Forbidden Tx	The total current number of 403 Forbidden responses transmitted by this service.
Total 404 Not Found Rx	The total current number of 404 Not Found responses received by this service.
Total 404 Not Found Tx	The total current number of 404 Not Found responses transmitted by this service.
Total 405 Method Not Allowed Rx	The total current number of 405 Method Not Allowed responses received by this service.
Total 405 Method Not Allowed Tx	The total current number of 405 Method Not Allowed responses transmitted by this service.

■ show cscf service statistics name <service_name> all

Field	Description
Total 407 Proxy Auth Required Rx	The total current number of 407 Proxy Auth Required responses received by this service.
Total 407 Proxy Auth Required Tx	The total current number of 407 Proxy Auth Required responses transmitted by this service.
Total 408 Request Timeout Rx	The total current number of 408 Request Timeout responses received by this service.
Total 408 Request Timeout Tx	The total current number of 408 Request Timeout responses transmitted by this service.
Total 420 Bad Extension Rx	The total current number of 420 Bad Extension responses received by this service.
Total 420 Bad Extension Tx	The total current number of 420 Bad Extension responses transmitted by this service.
Total 421 Extension Required Rx	The total current number of 421 Extension Required responses received by this service.
Total 421 Extension Required Tx	The total current number of 421 Extension Required responses transmitted by this service.
Total 480 Temp Not Available Rx	The total current number of 480 Temp Not Available responses received by this service.
Total 480 Temp Not Available Tx	The total current number of 480 Temp Not Available responses transmitted by this service.
Total 486 Busy Here Rx	The total current number of 486 Busy Here responses received by this service.
Total 486 Busy Here Tx	The total current number of 486 Busy Here responses transmitted by this service.
Total 487 Request Cancel Rx	The total current number of 487 Request Cancel responses received by this service.
Total 487 Request Cancel Tx	The total current number of 487 Request Cancel responses transmitted by this service.
Total 488 Not Acceptable Media Rx	The total current number of 488 Not Acceptable Media responses received by this service.
Total 488 Not Acceptable Media Tx	The total current number of 488 Not Acceptable Media responses transmitted by this service.
Total 4xx Responses Rx	The total current number of 4xx responses received by this service.
Total 4xx Responses Tx	The total current number of 4xx responses transmitted by this service.
Total 5xx Responses Rx	The total current number of 5xx responses received by this service.
Total 5xx Responses Tx	The total current number of 5xx responses transmitted by this service.
Total 500 Internal Error Rx	The total current number of 500 Internal Error responses received by this service.
Total 500 Internal Error Tx	The total current number of 500 Internal Error responses transmitted by this service.
Total 503 Service Unavailable Rx	The total current number of 503 Service Unavailable responses received by this service.
Total 503 Service Unavailable Tx	The total current number of 503 Service Unavailable responses transmitted by this service.
Total 6xx Responses Rx	The total current number of 6xx responses received by this service.

Field	Description
Total 6xx Responses Tx	The total current number of 6xx responses transmitted by this service.
Total CallReleaseAttempts Rx	The total current number of call release attempts received by this service.
Total CallReleaseAttempts Tx	The total current number of call release attempts transmitted by this service.
Total CallReleaseSuccess Rx	The total current number of call releases successfully received by this service.
Total CallReleaseSuccess Tx	The total current number of successful call releases transmitted by this service.
Total CallReleaseFailures Rx	The total current number of call release failures received by this service.
Total CallReleaseFailures Tx	The total current number of failed call releases transmitted by this service.
Total Call Attempts Challenged	The total current number of call attempts challenged on this service.
Total Session Timer Expires	The total current number of sessions on this service with expired timers.
Total Call Rejects from PCRF/PDF	The total current number of calls rejected by the PCRF/PDF from this service.
Total Call Rejects from Proxy (local)	The total current number of calls rejected by the local proxy from this service.
Total Too Large SIP Messages	The total current number of too large SIP messages on this service.
Total HSS Accesses	The total current number of HSS accesses by this service.
Total Emergency Calls	The total current number of emergency calls made through this service.
Total Toll Free Calls	The total current number of toll-free calls made through this service.
Total Premium Service Calls	The total current number of premium-service calls made through this service.
Total International Calls	The total current number of international calls made through this service.
Total LongDistance Calls	The total current number of long distance calls made through this service.
Total Operator Assisted Calls	The total current number of operator-assisted calls made through this service.
Total Directory Assisted Calls	The total current number of directory-assisted calls made through this service.
Total Media (audio) Loss Call Releases	The total current number of media (audio) loss call releases by this service.
Total RTP Packets Sent	The total current number of RTP packets sent by this service.
Total RTP Packets Received	The total current number of RTP packets received by this service.
Total MSRP Packets Sent	The total current number of MSRP TCP packets sent by this service.
Total MSRP Packets Received	The total current number of MSRP TCP packets received by this service.
Total RTCP Packets Sent	The total current number of RTCP packets sent by this service.

■ show cscf service statistics name <service_name> all

Field	Description
Total RTCP Packets Received	The total current number of RTCP packets received by this service.
Total Call Releases initiated by UE	The total current number of UE-initiated call releases. - For P-CSCF, the number of BYE initiated by UE. - For S-CSCF, the number of BYE received from P-CSCF (initiated by UE/P-CSCF).
Total Call Releases initiated by Network	The total current number of network-initiated call releases. - For P-CSCF, the number of BYE received from S-CSCF. - For S-CSCF, the number of BYE received from AS, etc.
Total Call Releases initiated by Radio Loss	The total current number of Radio Loss-initiated call releases; the number of BYE originated by P-CSCF due to radio coverage loss of UE.
Total Call Releases initiated by CSCF (Local)	The total current number of CSCF (Local)-initiated call releases; the number of BYE originated by CSCF due to CLI, radio loss, network-initiated de-registration, and internal processing failure.
Total Calls rejected due to Concurrent Call limit exceeded	The total current number of calls rejected due to concurrent call limit exceeded by this service.
CSCF Congestion Control Statistics	
Registration Attempts Rejected	The total current number of registration (SIP REGISTER message) attempts rejected by CSCF service due to congestion trigger.
Re-Registration Attempts Rejected	The total current number of re-registration (SIP REGISTER message) attempts rejected by CSCF service due to congestion trigger.
Call Setup Attempts Rejected	The total current number of call setup attempts (SIP INVITE) rejected by CSCF service due to congestion trigger.
Message Attempts Rejected	The total current number of SIP MESSAGE requests rejected by CSCF service due to congestion trigger.
Subscription Attempts Rejected	The total current number of SIP SUBSCRIBE requests rejected by CSCF service due to congestion trigger.
Notification Attempts Rejected	The total current number of SIP NOTIFY requests rejected by CSCF service due to congestion trigger.
Publish Attempts Rejected	The total current number of SIP PUBLISH attempts rejected by CSCF service due to congestion trigger.
Other SIP Message Attempts Rejected	The total current number of other SIP requests (excepts those mentioned above) rejected by CSCF service due to congestion trigger.
Messages dropped due to congestion	The total current number of SIP messages dropped by CSCF service due to congestion trigger.
TCP packets dropped due to congestion	The total current number of TCP packets dropped by CSCF service due to congestion trigger.
Number of times congestion applied	The number of times the sessmgr congestion control is triggered. This value is collected from all sessmgrs running the CSCF service.

Field	Description
Number of times congestion cleared	The number of times the sessmgr congestion control is cleared. This value is collected from all sessmgrs running the CSCF service.
CSCF MESSAGE Statistics	
Message Attempts Received	The total current number of message attempts received by this service.
Message Attempts Transmitted	The total current number of message attempts transmitted by this service.
Message Success Received	The total current number of successful messages received by this service.
Message Success Transmitted	The total current number of messages successfully transmitted by this service.
Message Failures Received	The total current number of message failures received by this service.
Message Failures Transmitted	The total current number of failed messages transmitted by this service.
3xx Response Received	The total current number of 3xx Response messages received on this service.
3xx Response Transmitted	The total current number of 3xx Response messages transmitted by this service.
400 Bad Request Received	The total current number of 400 Bad Request messages received on this service.
400 Bad Request Transmitted	The total current number of 400 Bad Request messages transmitted by this service.
403 Forbidden Received	The total current number of 403 Forbidden messages received on this service.
403 Forbidden Transmitted	The total current number of 403 Forbidden messages transmitted by this service.
404 Not Found Received	The total current number of 404 Not Found messages received on this service.
404 Not Found Transmitted	The total current number of 404 Not Found messages transmitted by this service.
413 Request Entity Too Large	The total current number of 413 Request Entity Too Large messages received on this service.
413 Request Entity Too Large	The total current number of 413 Request Entity Too Large messages transmitted by this service.
415 Unsupport Media Type Received	The total current number of 415 Unsupport Media Type messages received on this service.
415 Unsupport Media Type Transmitted	The total current number of 415 Unsupport Media Type messages transmitted by this service.
416 Unsupport URI Scheme Received	The total current number of 416 Unsupport URI Scheme messages received on this service.
416 Unsupport URI Scheme Transmitted	The total current number of 416 Unsupport URI Scheme messages transmitted by this service.
420 Bad Extension Received	The total current number of 420 Bad Extension messages received on this service.
420 Bad Extension Transmitted	The total current number of 420 Bad Extension messages transmitted by this service.
421 Extension Required Received	The total current number of 421 Extension Required messages received on this service.

■ show cscf service statistics name <service_name> all

Field	Description
421 Extension Required Transmitted	The total current number of 421 Extension Required messages transmitted by this service.
480 Temp Not Available Received	The total current number of 480 Temp Not Available messages received on this service.
480 Temp Not Available Transmitted	The total current number of 480 Temp Not Available messages transmitted by this service.
488 Not Acceptable Media Received	The total current number of 488 Not Acceptable Media messages received on this service.
488 Not Acceptable Media Transmitted	The total current number of 488 Not Acceptable Media messages transmitted by this service.
4xx Response Received	The total current number of 4xx Response messages received on this service.
4xx Response Transmitted	The total current number of 4xx Response messages transmitted by this service.
500 Internal Error Received	The total current number of 500 Internal Error messages received on this service.
500 Internal Error Transmitted	The total current number of 500 Internal Error messages transmitted by this service.
513 Message Too Large Received	The total current number of 513 Message Too Large messages received on this service.
513 Message Too Large Transmitted	The total current number of 513 Message Too Large messages transmitted by this service.
5xx Response Received	The total current number of 5xx Response messages received on this service.
5xx Response Transmitted	The total current number of 5xx Response messages transmitted by this service.
6xx Response Received	The total current number of 6xx Response messages received on this service.
6xx Response Transmitted	The total current number of 6xx Response messages transmitted by this service.
CSCF Performance	
Invite Processing Time	Minimum and maximum time (in ms) required to process an INVITE message (time elapsed between the INVITE entering the proxy and the INVITE forwarded out of the proxy).
First Response Time	Minimum and maximum time (in ms) between sending an INVITE message out of the proxy and the first response received for the INVITE (any 1xx).
Post Dial Delay	Minimum and maximum time (in ms) between sending an INVITE message out of the proxy and receiving the ringing message or any final response to the INVITE.
Session Setup Delay	Minimum and maximum time (in ms) between when an INVITE message was received by the proxy and a 200 OK (invite) sent out of the proxy.
Post Answer Delay	Minimum and maximum time (in ms) between a 200 OK INVITE message received by the proxy and the ACK message (for invite) sent out of the proxy.
Session Release Delay	Minimum and maximum time (in ms) between when a BYE message is received by the proxy and a 200 OK BYE is sent out of the proxy.
CSCF Registrations	
Current Registered Users	The current number of users registered to this service.

Field	Description
Current Secure Connections	The current number of secure connections to this service.
Current Unsecure Connections	The current number of unsecure connections to this service.
Total Failed Authentications	The total current number of failed authentications for this service.
Total Registration Expires	The total current number of expired registrations on this service.
Total Registration from Roaming UE	The total number of registrations from Roaming UE.
Total Successful Registration from Roaming UE	The total number 200 ok to registrations from Roaming UE.
Total Failed Registration from Roaming UE	The total number of failed registrations from Roaming UE.
Total 403 response to Registration from Roaming UE	The total number of 403 response to registration from Roaming UE.
Total Re-Registration from Roaming UE	The total number of re-registration from Roaming UE.
Total Successful Re-Registration from Roaming UE	The total number 200 ok to re-registrations from Roaming UE.
Total Failed Re-Registration from Roaming UE	The total number of failed re-registrations from Roaming UE.
Total 403 response to Re-Registration from Roaming UE	The total number of 403 response to re-registration from Roaming UE.
Total De-Registration from Roaming UE	The total number of de-registration from Roaming UE.
Total Successful De-Registration from Roaming UE	The total number 200 ok to de-registrations from Roaming UE.
Total Failed De-Registration from Roaming UE	The total number of failed de-registrations from Roaming UE.
Total 403 response to De-Registration from Roaming UE	The total number of 403 response to de-registration from Roaming UE.
Total De-registrations initiated by UE	The total current number of UE-initiated de-registration requests on this service.
Total De-registrations initiated by Network	The total current number of network-initiated de-registration requests received by P-CSCF from S-CSCF or by S-CSCF/SIP Proxy from internal/HSS trigger on this service.
Total Secure Registrations	The total current number of secure registrations on this service.

■ show cscf service statistics name <service_name> all

Field	Description
Total Failed Secure Registrations	The total current number of failed secure registrations on this service.
Registration Statistics	
Registration Attempts Received	The total current number of registration attempts received on this service.
Registration Attempts Transmitted	The total current number of registration attempts transmitted by this service.
Registration Success Received	The total current number of registration successes received on this service.
Registration Success Transmitted	The total current number of registration successes transmitted by this service.
Registration Failures Received	The total current number of registration failures received on this service.
Registration Failures Transmitted	The total current number of registration failures transmitted by this service.
401 Unauthorized (Registration) Received	The total current number of 401 Unauthorized responses to registration received on this service.
401 Unauthorized (Registration) Transmitted	The total current number of 401 Unauthorized responses to registration transmitted by this service.
403 Forbidden (Registration) Received	The total current number of 403 Forbidden responses to registration received on this service.
403 Forbidden (Registration) Transmitted	The total current number of 403 Forbidden responses to registration transmitted by this service.
404 Not Found (Registration) Received	The total current number of 404 Not Found responses to registration received on this service.
404 Not Found (Registration) Transmitted	The total current number of 404 Not Found responses to registration transmitted by this service.
420 Bad Extension (Registration) Received	The total current number of 420 Bad Extension responses to registration received on this service.
420 Bad Extension (Registration) Transmitted	The total current number of 420 Bad Extension responses to registration transmitted by this service.
439 First Hop Lack Ob (Registration) Received	The total current number of 439 First Hop Lack Outbound responses to registration received on this service.
439 First Hop Lack Ob (Registration) Transmitted	The total current number of 439 First Hop Lack Outbound responses to registration transmitted by this service.
4xx Responses (Registration) Received	The total current number of 4xx responses to registration received on this service.
4xx Responses (Registration) Transmitted	The total current number of 4xx responses to registration transmitted by this service.

Field	Description
500 Internal Error (Registration) Received	The total current number of 500 Internal Error responses to registration received on this service.
500 Internal Error (Registration) Transmitted	The total current number of 500 Internal Error responses to registration transmitted by this service.
5xx Responses (Registration) Received	The total current number of 5xx responses to registration received on this service.
5xx Responses (Registration) Transmitted	The total current number of 5xx responses to registration transmitted by this service.
6xx Responses (Registration) Received	The total current number of 6xx responses to registration received on this service.
6xx Responses (Registration) Transmitted	The total current number of 6xx responses to registration transmitted by this service.
Re-Registration Statistics	
Re-Registration Attempts Received	The total current number of re-registration attempts received on this service.
Re-Registration Attempts Transmitted	The total current number of re-registration attempts transmitted by this service.
Re-Registration Success Received	The total current number of re-registration successes received on this service.
Re-Registration Success Transmitted	The total current number of re-registration successes transmitted by this service.
Re-Registration Failures Received	The total current number of re-registration failures received on this service.
Re-Registration Failures Transmitted	The total current number of re-registration failures transmitted by this service.
401 Unauthorized (Re-Registration) Received	The total current number of 401 Unauthorized responses to re-registration received on this service.
401 Unauthorized (Re-Registration) Transmitted	The total current number of 401 Unauthorized responses to re-registration transmitted by this service.
403 Forbidden (Re-Registration) Received	The total current number of 403 Forbidden responses to re-registration received on this service.
403 Forbidden (Re-Registration) Transmitted	The total current number of 403 Forbidden responses to re-registration transmitted by this service.
404 Not Found (Re-Registration) Received	The total current number of 404 Not Found responses to re-registration received on this service.
404 Not Found (Re-Registration) Transmitted	The total current number of 404 Not Found responses to re-registration transmitted by this service.
420 Bad Extension (Re-Registration) Received	The total current number of 420 Bad Extension responses to re-registration received on this service.

■ show cscf service statistics name <service_name> all

Field	Description
420 Bad Extension (Re-Registration) Transmitted	The total current number of 420 Bad Extension responses to re-registration transmitted by this service.
439 First Hop Lack Ob (Re-Registration) Received	The total current number of 439 First Hop Lack Outbound responses to re-registration received on this service.
439 First Hop Lack Ob (Re-Registration) Transmitted	The total current number of 439 First Hop Lack Outbound responses to re-registration transmitted by this service.
4xx Responses (Re-Registration) Received	The total current number of 4xx responses to re-registration received on this service.
4xx Responses (Re-Registration) Transmitted	The total current number of 4xx responses to re-registration transmitted by this service.
500 Internal Error (Re-Registration) Received	The total current number of 500 Internal Error responses to re-registration received on this service.
500 Internal Error (Re-Registration) Transmitted	The total current number of 500 Internal Error responses to re-registration transmitted by this service.
5xx Responses (Re-Registration) Received	The total current number of 5xx responses to re-registration received on this service.
5xx Responses (Re-Registration) Transmitted	The total current number of 5xx responses to re-registration transmitted by this service.
6xx Responses (Re-Registration) Received	The total current number of 6xx responses to re-registration received on this service.
6xx Responses (Re-Registration) Transmitted	The total current number of 6xx responses to re-registration transmitted by this service.
De-Registration Statistics	
De-Registration Attempts Received	The total current number of de-registration attempts received on this service.
De-Registration Attempts Transmitted	The total current number of de-registration attempts transmitted by this service.
De-Registration Success Received	The total current number of de-registration successes received on this service.
De-Registration Success Transmitted	The total current number of de-registration successes transmitted by this service.
De-Registration Failures Received	The total current number of de-registration failures received on this service.
De-Registration Failures Transmitted	The total current number of de-registration failures transmitted by this service.
401 Unauthorized (De-Registration) Received	The total current number of 401 Unauthorized responses to de-registration received on this service.
401 Unauthorized (De-Registration) Transmitted	The total current number of 401 Unauthorized responses to de-registration transmitted by this service.

Field	Description
403 Forbidden (De-Registration) Received	The total current number of 403 Forbidden responses to de-registration received on this service.
403 Forbidden (De-Registration) Transmitted	The total current number of 403 Forbidden responses to de-registration transmitted by this service.
404 Not Found (De-Registration) Received	The total current number of 404 Not Found responses to de-registration received on this service.
404 Not Found (De-Registration) Transmitted	The total current number of 404 Not Found responses to de-registration transmitted by this service.
420 Bad Extension (De-Registration) Received	The total current number of 420 Bad Extension responses to de-registration received on this service.
420 Bad Extension (De-Registration) Transmitted	The total current number of 420 Bad Extension responses to de-registration transmitted by this service.
439 First HopLackOb (De-Registration) Received	The total current number of 439 First Hop Lack Outbound responses to de-registration received on this service.
439 First HopLackOb (De-Registration) Transmitted	The total current number of 439 First Hop Lack Outbound responses to de-registration transmitted by this service.
4xx Responses (De-Registration) Received	The total current number of 4xx responses to de-registration received on this service.
4xx Responses (De-Registration) Transmitted	The total current number of 4xx responses to de-registration transmitted by this service.
500 Internal Error (De-Registration) Received	The total current number of 500 Internal Error responses to de-registration received on this service.
500 Internal Error (De-Registration) Transmitted	The total current number of 500 Internal Error responses to de-registration transmitted by this service.
5xx Responses (Re-Registration) Received	The total current number of 5xx responses to de-registration received on this service.
5xx Responses (De-Registration) Transmitted	The total current number of 5xx responses to de-registration transmitted by this service.
6xx Responses (De-Registration) Received	The total current number of 6xx responses to de-registration received on this service.
6xx Responses (De-Registration) Transmitted	The total current number of 6xx responses to de-registration transmitted by this service.
Unclassified Requests (Registration) Received	The total current number of unclassified request responses to registration received on this service.
4XX Responses (Unclassified Requests) Transmitted	The total current number of 4XX responses (Unclassified Requests) transmitted by this service.
5XX Responses (Unclassified Requests) Transmitted	The total current number of 5XX Responses (Unclassified Requests) transmitted by this service.
IP-Security Statistics	
Total Secure Connection	The total number of subscribers with secure connections on this service.

■ show cscf service statistics name <service_name> all

Field	Description
Total Unsecure Connection	The total number of subscribers with unsecure connections on this service.
Total Security Association Rejects	The total number of security association rejections on this service.
Total Secure Registrations	The total number of secure registrations on this service.
Total Secure Re-registrations	The total number of secure re-registrations on this service.
Total Secure De-registrations	The total number of secure de-registrations on this service.
Total Emergency Registrations	The total number of emergency registrations on this service.
Total Failed Secure Registrations	The total number of failed secure registrations on this service.
Total IP-Sec Packets Received	The total number of IPSec packets received on this service.
Total IP-Sec Packets Transmitted	The total number of IPSec packets transmitted by this service.
Total IP-Sec Octets Received	The total number of IPSec octets received on this service.
Total IP-Sec Octets Transmitted	The total number of IPSec octets transmitted by this service.
Total Registration Rejects Due to Sec-Agree	The total number of registration rejections due to security agreement on this service.
Total Registration Rejects Due to Algorithm Mismatch	The total number of registration rejections due to algorithm mismatch on this service.
Total Messages Dropped Due to Error	The total number of messages dropped due to error on this service.
Total Messages With Incorrect Security Verify	The total number of messages with incorrect security verification on this service.
MSRP TCP Connection Statistics	
Total TCP Subscribers	The total number of subscribers having TCP connections for MSRP Signaling on this service.
Active Connections	The total number of active TCP connections for MSRP Signaling on this service.
Total Connections Closed	The total number of TCP connections for MSRP Signaling closed on this service.
Total Successful Outgoing Connections	The total number of successful outgoing TCP connections for MSRP Signaling on this service.
Total Failed Outgoing Connections	The total number of failed outgoing TCP connections for MSRP Signaling on this service.
Total Successful Incoming Connections	The total number of successful incoming TCP connections for MSRP Signaling on this service.
Total Failed Incoming Connections	The total number of failed incoming TCP connections for MSRP Signaling on this service.
Total Packets Sent	The total number of TCP/IP packets transmitted by CSCF service.

Field	Description
Total Packets Received	The total number of TCP/IP packets received by CSCF service.
Total Bytes Sent	The total number of bytes transmitted.
Total Bytes Received	The total number of bytes received.
Others	
Current CSCF Sessions	The number of currently active CSCF sessions existing on this service.
Total CSCF Sessions	Total number of CSCF sessions created so far for originating/proxying SIP messages. This counter should not include CSCF sessions created for internal processing, like ROUTE REQUEST. Also, this counter should not get incremented for REGISTER requests received by S-CSCF as it acts as registrar and S-CSCF call leg itself can handle this.
Total TCP Subscribers	Total number of subscribers with an active TCP connection (MSRP, SIP, or both) existing on this service.
Active TCP Connections	Total number of currently active TCP connections for both MSRP and SIP existing on this service.
Current IPsec TCP Connections	Total number of currently active IPsec TCP connections existing on this service.
405 Method Not Allowed Rejections	Total number of 405 Method Not Allowed Rejections existing on this service.
SigComp Statistics	
Total Requests Compressed	The total number of SIP request messages compressed by this service.
Total Requests Decompressed	The total number of SIP request messages decompressed by this service.
Total Responses Compressed	The total number of SIP response messages compressed by this service.
Total Responses Decompressed	The total number of SIP response messages decompressed by this service.
Total NACK Packets Received	The total number of NACK (negative acknowledgement) packets received by this service.
Total NACK Packets Transmitted	The total number of NACK (negative acknowledgement) packets transmitted by this service.
Total Compression Failures	The current total number of compression failures that occurred in this service.
Total Decompression Failures	The current total number of decompression failures that occurred in this service.
SigComp Effectiveness Ratio results in this section are derived using the following formula: $(S_b - S_a) * 100 / (S_b)$ where S_b = the size of the message before compression and S_a = the size of the message after compression.	
Best compression ratio (Outgoing message)	The current best compression ratio achieved for messages sent by this service.
Worst compression ratio (Outgoing message)	The current worst compression ratio achieved for messages sent by this service. Usually this will be a negative value indicating that the message had expanded instead of compressed.

■ show cscf service statistics name <service_name> all

Field	Description
Average compression ratio (Outgoing message)	The running average compression of messages sent by this service. The average is derived using the following formula: $(S(Sb) - S(Sa)) * 100 / (S(Sb))$.
Best compression ratio (Incoming message)	The current best compression ratio achieved for messages received by this service.
Worst compression ratio (Incoming message)	The current worst compression ratio achieved for messages received by this service. Usually this will be a negative value indicating that the message had expanded instead of compressed.
Average compression ratio (Incoming message)	The running average compression of messages received by this service. The average is derived using the following formula: $(S(Sb) - S(Sa)) * 100 / (S(Sb))$.
SIP TCP Connection Statistics	
Total TCP Subscribers	The total number of subscribers having TCP connections for SIP Signaling on this service.
Active Connections	The total number of active TCP connections for SIP Signaling on this service.
Total Connections Closed	The total number of TCP connections for SIP Signaling closed on this service.
Total Successful Outgoing Connections	The total number of successful outgoing TCP connections for SIP Signaling on this service.
Total Failed Outgoing Connections	The total number of failed outgoing TCP connections for SIP Signaling on this service.
Total Successful Incoming Connections	The total number of successful incoming TCP connections for SIP Signaling on this service.
Total Failed Incoming Connections	The total number of failed incoming TCP connections for SIP Signaling on this service.
Total Migrated Connections	The total number of TCP connections migrated from Cscfmgr to Sessmgr for load balancing.
Total Packets Sent	The total number of TCP/IP packets transmitted by CSCF service.
Total Packets Received	The total number of TCP/IP packets received by CSCF service.
Total Bytes Sent	The total number of bytes transmitted.
Total Bytes Received	The total number of bytes received.
Subscription Package	
Subscription Attempts Received	The total current number of subscription attempts received on this service.
Subscription Attempts Transmitted	The total current number of subscription attempts transmitted by this service.
Subscription Success Received	The total current number of subscription successes received on this service.
Subscription Success Transmitted	The total current number of subscription successes transmitted by this service.
Subscription Failures Received	The total current number of subscription failures received on this service.
Subscription Failures Transmitted	The total current number of subscription failures transmitted by this service.

Field	Description
200 OK (Subscription) Received	The total current number of 200 OK responses to registration received on this service.
200 OK (Subscription) Transmitted	The total current number of 200 OK responses to registration transmitted by this service.
202 Accepted (Subscription) Received	The total current number of 202 Accepted responses to registration received on this service.
202 Accepted (Subscription) Transmitted	The total current number of 202 Accepted responses to registration transmitted by this service.
400 Bad Request (Subscription) Received	The total current number of 400 Bad Request responses to registration received on this service.
400 Bad Request (Subscription) Transmitted	The total current number of 400 Bad Request responses to registration transmitted by this service.
403 Forbidden (Subscription) Received	The total current number of 403 Forbidden responses to registration received on this service.
403 Forbidden (Subscription) Transmitted	The total current number of 403 Forbidden responses to registration transmitted by this service.
481 Trans Does Not Exist (Subscription) Received	The total current number of 481 Trans Does Not Exist responses to registration received on this service.
481 Trans Does Not Exist (Subscription) Transmitted	The total current number of 481 Trans Does Not Exist responses to registration transmitted by this service.
489 Bad Event (Subscription) Received	The total current number of 489 Bad Event responses to registration received on this service.
489 Bad Event (Subscription) Transmitted	The total current number of 489 Bad Event responses to registration transmitted by this service.
500 Internal Error (Subscription) Received	The total current number of 500 Internal Error responses to registration received on this service.
500 Internal Error (Subscription) Transmitted	The total current number of 500 Internal Error responses to registration transmitted by this service.
Re-Subscription Attempts Received	The total current number of re-subscription attempts received on this service.
Re-Subscription Attempts Transmitted	The total current number of re-subscription attempts transmitted by this service.
Re-Subscription Success Received	The total current number of re-subscription successes received on this service.
Re-Subscription Success Transmitted	The total current number of re-subscription successes transmitted by this service.
Re-Subscription Failures Received	The total current number of re-subscription failures received on this service.
Re-Subscription Failures Transmitted	The total current number of re-subscription failures transmitted by this service.

■ show cscf service statistics name <service_name> all

Field	Description
200 OK (Re-Subscription) Received	The total current number of 200 OK responses to re-registration received on this service.
200 OK (Re-Subscription) Transmitted	The total current number of 200 OK responses to re-registration transmitted by this service.
202 Accepted (Re-Subscription) Received	The total current number of 202 Accepted responses to re-registration received on this service.
202 Accepted (Re-Subscription) Transmitted	The total current number of 202 Accepted responses to re-registration transmitted by this service.
400 Bad Request (Re-Subscription) Received	The total current number of 400 Bad Request responses to re-registration received on this service.
400 Bad Request (Re-Subscription) Transmitted	The total current number of 400 Bad Request responses to re-registration transmitted by this service.
403 Forbidden (Re-Subscription) Received	The total current number of 403 Forbidden responses to re-registration received on this service.
403 Forbidden (Re-Subscription) Transmitted	The total current number of 403 Forbidden responses to re-registration transmitted by this service.
481 Trans Does Not Exist (Re-Subscription) Received	The total current number of 481 Trans Does Not Exist responses to re-registration received on this service.
481 Trans Does Not Exist (Re-Subscription) Transmitted	The total current number of 481 Trans Does Not Exist responses to re-registration transmitted by this service.
489 Bad Event (Re-Subscription) Received	The total current number of 489 Bad Event responses to re-registration received on this service.
489 Bad Event (Re-Subscription) Transmitted	The total current number of 489 Bad Event responses to re-registration transmitted by this service.
500 Internal Error (Re-Subscription) Received	The total current number of 500 Internal Error responses to re-registration received on this service.
500 Internal Error (Re-Subscription) Transmitted	The total current number of 500 Internal Error responses to re-registration transmitted by this service.
Un-Subscription Attempts Received	The total current number of un-subscription attempts received on this service.
Un-Subscription Attempts Transmitted	The total current number of un-subscription attempts transmitted by this service.
Un-Subscription Success Received	The total current number of un-subscription successes received on this service.
Un-Subscription Success Transmitted	The total current number of un-subscription successes transmitted by this service.
Un-Subscription Failures Received	The total current number of un-subscription failures received on this service.

Field	Description
Un-Subscription Failures Transmitted	The total current number of un-subscription failures transmitted by this service.
200 OK (Un-Subscription) Received	The total current number of 200 OK responses to un-registration received on this service.
200 OK (Un-Subscription) Transmitted	The total current number of 200 OK responses to un-registration transmitted by this service.
202 Accepted (Un-Subscription) Received	The total current number of 202 Accepted responses to un-registration received on this service.
202 Accepted (Un-Subscription) Transmitted	The total current number of 202 Accepted responses to un-registration transmitted by this service.
400 Bad Request (Un-Subscription) Received	The total current number of 400 Bad Request responses to un-registration received on this service.
400 Bad Request (Un-Subscription) Transmitted	The total current number of 400 Bad Request responses to un-registration transmitted by this service.
403 Forbidden (Un-Subscription) Received	The total current number of 403 Forbidden responses to un-registration received on this service.
403 Forbidden (Un-Subscription) Transmitted	The total current number of 403 Forbidden responses to un-registration transmitted by this service.
481 Trans Does Not Exist (Un-Subscription) Received	The total current number of 481 Trans Does Not Exist responses to un-registration received on this service.
481 Trans Does Not Exist (Un-Subscription) Transmitted	The total current number of 481 Trans Does Not Exist responses to un-registration transmitted by this service.
489 Bad Event (Un-Subscription) Received	The total current number of 489 Bad Event responses to un-registration received on this service.
489 Bad Event (Un-Subscription) Transmitted	The total current number of 489 Bad Event responses to un-registration transmitted by this service.
500 Internal Error (Un-Subscription) Received	The total current number of 500 Internal Error responses to un-registration received on this service.
500 Internal Error (Un-Subscription) Transmitted	The total current number of 500 Internal Error responses to un-registration transmitted by this service.
Notify Attempts Received	The total current number of notify attempts received on this service.
Notify Attempts Transmitted	The total current number of notify attempts transmitted by this service.
Notify Success Received	The total current number of notify successes received on this service.
Notify Success Transmitted	The total current number of notify successes transmitted by this service.
Notify Failures Received	The total current number of notify failures received on this service.
Notify Failures Transmitted	The total current number of notify failures transmitted by this service.
Publish Attempts Received	The total current number of publish attempts received on this service.

■ show cscf service statistics name <service_name> all

Field	Description
Publish Attempts Transmitted	The total current number of publish attempts transmitted by this service.
Publish Success Received	The total current number of publish successes received on this service.
Publish Success Transmitted	The total current number of publish successes transmitted by this service.
Publish Failures Received	The total current number of publish failures received on this service.
Publish Failures Transmitted	The total current number of publish failures transmitted by this service.
Un-Publish Attempts Received	The total current number of un-publish attempts received on this service.
Un-Publish Attempts Transmitted	The total current number of un-publish attempts transmitted by this service.
Un-Publish Success Received	The total current number of un-publish successes received on this service.
Un-Publish Success Transmitted	The total current number of un-publish successes transmitted by this service.
Un-Publish Failures Received	The total current number of un-publish failures received on this service.
Un-Publish Failures Transmitted	The total current number of un-publish failures transmitted by this service.
TCP Connection Statistics	
Active IP-Sec Connections	The total number of active IPSec TCP connections on this service.
Total IP-Sec Connections Closed	The total number of IPSec TCP connections closed on this service.
Total Successful IP-Sec Outgoing Connections	The total number of successful outgoing IPSec TCP connections on this service.
Total Failed IP-Sec Outgoing Connections	The total number of failed outgoing IPSec TCP connections on this service.
Total Successful IP-Sec Incoming Connections	The total number of successful incoming IPSec TCP connections on this service.
Total Failed IP-Sec Incoming Connections	The total number of failed incoming IPSec TCP connections on this service.

show cscf sessions counters

Table 207. show cscf sessions counters Command Output Descriptions

Field	Description
Interval	
<200ms	The number of sessions that had a duration of less than 200 millisecond.
200..400ms	The number of sessions that had a duration between 200 and 400 milliseconds.
400..600ms	The number of sessions that had a duration between 400 and 600 milliseconds.
600..800ms	The number of sessions that had a duration between 600 and 800 milliseconds.
800..1000ms	The number of sessions that had a duration between 800 and 1000 milliseconds.
1000..1200ms	The number of sessions that had a duration between 1000 and 1200 milliseconds.
1200..1400ms	The number of sessions that had a duration between 1200 and 1400 milliseconds.
1400..1600ms	The number of sessions that had a duration between 1400 and 1600 milliseconds.
1600..1800ms	The number of sessions that had a duration between 1600 and 1800 milliseconds.
1800..2000ms	The number of sessions that had a duration between 1800 and 2000 milliseconds.
2000..2200ms	The number of sessions that had a duration between 2000 and 2200 milli seconds.
2200..2400ms	The number of sessions that had a duration between 2200 and 2400 milliseconds.
2400..2600ms	The number of sessions that had a duration between 2400 and 2600 milliseconds.
2600..2800ms	The number of sessions that had a duration between 2600 and 2800 milliseconds.
2800..3000ms	The number of sessions that had a duration between 2800 and 3000 milliseconds.
3..5sec	The number of sessions that had a duration between three and five seconds.
5..7sec	The number of sessions that had a duration between five and seven seconds.
7..9sec	The number of sessions that had a duration between seven and nine seconds.
9..11sec	The number of sessions that had a duration between nine and 11 seconds.
11..13sec	The number of sessions that had a duration between 11 and 13 seconds.
13..15sec	The number of sessions that had a duration between 13 and 15 seconds.
15..17sec	The number of sessions that had a duration between 15 and 17 seconds.
17..19sec	The number of sessions that had a duration between 17 and 19 seconds.
19..21sec	The number of sessions that had a duration between 19 and 21 seconds.
>21sec	The number of sessions that had a duration of more than 21 seconds.

Field	Description
Count The following provide total counts for each session type per specified interval.	
Invite Processing Time	Time required to process an INVITE message (time elapsed between the INVITE entering the proxy and the INVITE forwarded out of the proxy).
First Response Delay	Time between sending an INVITE message out of the proxy and the first response received for the INVITE (any 1xx).
Post Dial Delay	Time between sending an INVITE message out of the proxy and receiving the ringing message or any final response to the INVITE.
Session Setup Delay	Time between when an INVITE message was received by the proxy and a 200 OK (invite) sent out of the proxy.
Post Answer Delay	Time between a 200 OK INVITE message received by the proxy and the ACK message (for invite) sent out of the proxy.
Session Release Delay	Time between when a BYE message is received by the proxy and a 200 OK BYE is sent out of the proxy.

show cscf sessions duration

Table 208. show cscf sessions duration Command Output Descriptions

Field	Description
<1s	The number of sessions that had a duration of less than one second.
01..10sec	The number of sessions that had a duration between one and 10 seconds.
10..30sec	The number of sessions that had a duration between 10 and 30 seconds.
30..60sec	The number of sessions that had a duration between 30 and 60 seconds.
01..03min	The number of sessions that had a duration between one and three minutes.
03..05min	The number of sessions that had a duration between three and five minutes.
05..07min	The number of sessions that had a duration between five and seven minutes.
07..09min	The number of sessions that had a duration between seven and nine minutes.
09..11min	The number of sessions that had a duration between nine and 11 minutes.
11..13min	The number of sessions that had a duration between 11 and 13 minutes.
13..15min	The number of sessions that had a duration between 13 and 15 minutes.
15..17min	The number of sessions that had a duration between 15 and 17 minutes.
17..19min	The number of sessions that had a duration between 17 and 19 minutes.
19..21min	The number of sessions that had a duration between 19 and 21 minutes.
21..23min	The number of sessions that had a duration between 21 and 23 minutes.
23..25min	The number of sessions that had a duration between 23 and 25 minutes.
25..27min	The number of sessions that had a duration between 25 and 27 minutes.
27..29min	The number of sessions that had a duration between 27 and 29 minutes.
29..60min	The number of sessions that had a duration between 29 and 60 minutes.
>60min	The number of sessions that had a duration of more than 60 minutes.
<1hr	The number of sessions that had a duration of less than one hour.
1..2hrs	The number of sessions that had a duration between one and two hours.
2..3hrs	The number of sessions that had a duration between two and three hours.
3..4hrs	The number of sessions that had a duration between three and four hours.
4..5hrs	The number of sessions that had a duration between four and five hours.
5..6hrs	The number of sessions that had a duration between five and six hours.
6..7hrs	The number of sessions that had a duration between six and seven hours.

Field	Description
7..8hrs	The number of sessions that had a duration between seven and eight hours.
8..9hrs	The number of sessions that had a duration between eight and nine hours.
9..10hrs	The number of sessions that had a duration between nine and 10 hours.
>10hrs	The number of sessions that had a duration of more than 10 hours.

show cscf sip statistics

Table 209. show cscf sip statistics Command Output Descriptions

Field	Description
CSCF Service	The name of the service and context.
Peer IP Address	The IP address of the peer server expressed in IPv4 or IPv6 dotted decimal notation.
SIP Request Statistics	
Register	The total number of SIP Register requests received (Rx) or transmitted (Tx) by this service.
Invite	The total number of INVITE requests received (Rx) or transmitted (Tx) by this service.
Ack	The total number of ACK requests received (Rx) or transmitted (Tx) by this service.
Bye	The total number of Bye requests received (Rx) or transmitted (Tx) by this service.
Info	The total number of Info requests received (Rx) or transmitted (Tx) by this service.
Prack	The total number of PRACK requests received (Rx) or transmitted (Tx) by this service.
Refer	The total number of Refer requests received (Rx) or transmitted (Tx) by this service.
Cancel	The total number of Cancel requests received (Rx) or transmitted (Tx) by this service.
Notify	The total number of Notify requests received (Rx) or transmitted (Tx) by this service.
Update	The total number of Update requests received (Rx) or transmitted (Tx) by this service.
Message	The total number of Message requests received (Rx) or transmitted (Tx) by this service.
Options	The total number of Options requests received (Rx) or transmitted (Tx) by this service.
Publish	The total number of Publish requests received (Rx) or transmitted (Tx) by this service.
Subscribe	The total number of Subscribe requests received (Rx) or transmitted (Tx) by this service.
Notify	The total number of Notify requests received (Rx) or transmitted (Tx) by this service.
SIP Response Statistics	
100 Trying	The total number of 100 Trying responses received (Rx) or transmitted (Tx) by this service.
180 Ringing	The total number of 180 Ringing responses received (Rx) or transmitted (Tx) by this service.
181 Forwarding	The total number of 181 Forwarded responses received (Rx) or transmitted (Tx) by this service.
182 Queued	The total number of 182 Queued responses received (Rx) or transmitted (Tx) by this service.
183 Progress	The total number of 183 Progress responses received (Rx) or transmitted (Tx) by this service.

Field	Description
200 Ok (Register)	The total number of 200 OK Register responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Invite)	The total number of 200 OK Invite responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Bye)	The total number of 200 OK Bye responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Info)	The total number of 200 OK Info responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Prack)	The total number of 200 OK PRACK responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Refer)	The total number of 200 OK Refer responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Cancel)	The total number of 200 OK Cancel responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Notify)	The total number of 200 OK Notify responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Update)	The total number of 200 OK Update responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Message)	The total number of 200 OK Message responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Options)	The total number of 200 OK Options responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Publish)	The total number of 200 OK Publish responses received (Rx) or transmitted (Tx) by this service.
200 Ok (Subscribe)	The total number of 200 OK Subscribe responses received (Rx) or transmitted (Tx) by this service.
202 Accepted (Refer)	The total number of 202 Accepted Refer responses received (Rx) or transmitted (Tx) by this service.
202 Accepted (Subscribe)	The total number of 202 Accepted Subscribe responses received (Rx) or transmitted (Tx) by this service.
300 Multiple Choices	The total number of Multiple Choices responses received (Rx) or transmitted (Tx) by this service.
301 Moved Permanently	The total number of Moved Permanently responses received (Rx) or transmitted (Tx) by this service.
302 Moved Temporarily	The total number of Moved Temporarily responses received (Rx) or transmitted (Tx) by this service.
305 Use Proxy	The total number of Use Proxy responses received (Rx) or transmitted (Tx) by this service.
380 Alternative Service	The total number of Alternative Service responses received (Rx) or transmitted (Tx) by this service.

Field	Description
400 Bad Request	The total number of 400 Bad Request errors received (Rx) or transmitted (Tx) by this service.
401 Unauthorized	The total number of 401 Unauthorized errors received (Rx) or transmitted (Tx) by this service.
403 Forbidden	The total number of 403 Forbidden errors received (Rx) or transmitted (Tx) by this service.
404 Not Found	The total number of 404 Not Found errors received (Rx) or transmitted (Tx) by this service.
405 Method Not Allowed	The total number of 405 Method Not Allowed errors received (Rx) or transmitted (Tx) by this service.
406 Not Acceptable	The total number of 406 Not Acceptable errors received (Rx) or transmitted (Tx) by this service.
407 Proxy Auth Required	The total number of 407 Proxy Auth Required errors received (Rx) or transmitted (Tx) by this service.
408 Request Timeout	The total number of 408 Request Timeout errors received (Rx) or transmitted (Tx) by this service.
410 Gone	The total number of 410 Gone errors received (Rx) or transmitted (Tx) by this service.
412 Conditional Req Fail	The total number of 412 Conditional Request Fail errors received (Rx) or transmitted (Tx) by this service.
413 Req Entity Too Large	The total number of 413 Request Entity Too Large errors received (Rx) or transmitted (Tx) by this service.
414 Req URI Too Long	The total number of 414 Request URI Too Long errors received (Rx) or transmitted (Tx) by this service.
415 Unsupport Media Type	The total number of 415 Unsupported Media Type errors received (Rx) or transmitted (Tx) by this service.
416 Unsupport URI Scheme	The total number of 416 Unsupported URI Scheme errors received (Rx) or transmitted (Tx) by this service.
420 Bad Extension	The total number of 420 Bad Extension errors received (Rx) or transmitted (Tx) by this service.
421 Extension Required	The total number of 421 Extension Required errors received (Rx) or transmitted (Tx) by this service.
423 Interval Too Brief	The total number of 423 Interval Too Brief errors received (Rx) or transmitted (Tx) by this service.
480 Temp Not Available	The total number of 480 Temp Not Available errors received (Rx) or transmitted (Tx) by this service.
481 Trans Does Not Exist	The total number of 481 Transaction Does Not Exist errors received (Rx) or transmitted (Tx) by this service.
482 Loop Detected	The total number of 482 Loop Detected errors received (Rx) or transmitted (Tx) by this service.

Field	Description
483 Too Many Hops	The total number of 483 Too Many Hops errors received (Rx) or transmitted (Tx) by this service.
484 Address Incomplete	The total number of 484 Address Incomplete errors received (Rx) or transmitted (Tx) by this service.
485 Ambiguous	The total number of 485 Ambiguous errors received (Rx) or transmitted (Tx) by this service.
486 Busy Here	The total number of 486 Busy Here errors received (Rx) or transmitted (Tx) by this service.
487 Request Cancel	The total number of 487 Request Cancel errors received (Rx) or transmitted (Tx) by this service.
488 Not Acceptable Media	The total number of 488 Not Acceptable Media errors received (Rx) or transmitted (Tx) by this service.
489 Bad Event	The total number of 489 Bad Event errors received (Rx) or transmitted (Tx) by this service.
491 Request Pending	The total number of 491 Request Pending errors received (Rx) or transmitted (Tx) by this service.
493 Undecipherable	The total number of 493 Undecipherable errors received (Rx) or transmitted (Tx) by this service.
500 Internal Error	The total number of 500 Internal Error errors received (Rx) or transmitted (Tx) by this service.
501 Not Implemented	The total number of 501 Not Implemented errors received (Rx) or transmitted (Tx) by this service.
502 Bad Gateway	The total number of 502 Bad Gateway errors received (Rx) or transmitted (Tx) by this service.
503 Service Unavailable	The total number of 503 Service Unavailable errors received (Rx) or transmitted (Tx) by this service.
504 Gateway Timeout	The total number of 504 Gateway Timeout errors received (Rx) or transmitted (Tx) by this service.
505 Bad SIP Version	The total number of 505 Bad SIP Version errors received (Rx) or transmitted (Tx) by this service.
513 Message Too Large	The total number of 513 Message Too Large errors received (Rx) or transmitted (Tx) by this service.
580 Precondition Failure	The total number of 580 Precondition Failure errors received (Rx) or transmitted (Tx) by this service.
600 Busy Everywhere	The total number of 600 Busy Everywhere errors received (Rx) or transmitted (Tx) by this service.
603 Decline	The total number of 603 Decline errors received (Rx) or transmitted (Tx) by this service.
604 Not Exist Anywhere	The total number of 604 Not Exist Anywhere errors received (Rx) or transmitted (Tx) by this service.

Field	Description
606 Not Acceptable	The total number of 606 Not Acceptable errors received (Rx) or transmitted (Tx) by this service.
Total Invalid Messages	The total number of SIP Invalid Messages received (Rx) or transmitted (Tx) by this service.
Total Messages	The total number of SIP Messages received (Rx) or transmitted (Tx) by this service.
TCP Request	The total number of SIP requests received (Rx) or transmitted (Tx) over TCP by this service.
TCP Response	The total number of SIP responses received (Rx) or transmitted (Tx) over TCP by this service.
Auto switch to TCP on MTU size limit	The total number of times CSCF switched from UDP to TCP because of message size larger than MTU.

show cscf tcp connections

Table 210. show cscf tcp connections Command Output Descriptions

Field	Description
TCP Connection Details	
LocalIp	The local IP address, expressed in IPv4 or IPv6 dotted decimal notation, of the TCP connection.
Local Port	The local port number of the TCP connection.
RemoteIp	The remote IP address, expressed in IPv4 or IPv6 dotted decimal notation, of the TCP connection.
Remote Port	The remote port number of the TCP connection.
Facility	Facility type for which connection details have to be retrieved—CscfMgr or SessMgr.
Instance	The instance number of the facility that the connection belongs to.
SockDesc	The socket descriptor id.
State	The state of the connection. TCP states are: • CLOSED • LISTEN • SYNCSSENT • SYNCRCVD • ESTABLISHED • CLOSEWAIT • FINWAIT1 • CLOSING • LASTACK • FINWAIT2 • TIMEWAIT • INVALID
BytesInRecvQueue	Data size in the receive queue, in bytes.
BytesInSendQueue	Data size in the send queue, in bytes.
RecvQueueSize	Size of the receive queue, in bytes.
SendQueueSize	Size of the send queue, in bytes.
MaxSendWind	Maximum send window seen so far.
SndUna	Send unacknowledged sequence value.
SndNext	Send next sequence value.

Field	Description
MaxSndNext	Highest sequence number sent.
Iss	Initial send sequence number.
Irs	Initial receive sequence number.
Rto	Retransmission timeout.
SndWL1	Send segment sequence number used for last window update.
SndWL2	Send segment acknowledgment number used for last window update.
MaxSndWind	Maximum send window seen so far.
RecvNxt	Receive next sequence.
RecvWind	Receive window sequence.
RecvAdv	Sequence number of right edge of advertised window.
CWind	Send congestion window.
Ssthresh	Send slow start threshold size.
BackLog	Back logs.
DupAck	Duplicate ACKs.
RetransSegments	Number of retransmitted segments.
AckAfterRetrans	Number of non duplicate acks after duplicate ACK.
TcpFlags	TCP flags.
Total TCP sockets	The total number of TCP sockets.

Chapter 89

show dhcp

This chapter includes the **show dhcp** command output tables.

show dhcp call-id

Table 211. show dhcp call-id Command Output Descriptions

Field	Description
Session Counters	
Total Current	The total number of currently active sessions on the system that received DHCP-assigned IP addresses.
DHCP Proxy	The total number of currently active sessions that were assigned IP addresses using the DHCP Proxy method.
DHCP Messages	
DISCOVER TX	The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER retransmitted	The number of DHCPDISCOVER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER relayed	The number of DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay method.
OFFER RX	The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER Discarded	The number of DHCPOFFER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER relayed	The number of DHCPOFFER messages relayed by the system to the mobile as part of the DHCP Relay method.
REQUEST TX	The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST retransmitted	The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST relayed	The number of DHCPREQUEST messages relayed by the system to the mobile as part of the DHCP Relay method.
ACK RX	The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method.
ACK for INFORM	The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
ACK relayed	The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method.
NAK RX	The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method.
NAK for INFORM	The number of number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
NAK relayed	The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method.
DECLINE relayed	The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method.

Field	Description
RELEASE relayed	The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method.
INFORM relayed	The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method.
DHCP OFFER Discard Reasons: (dhcp-proxy)	
Parse error	The number of DHCPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
Lease less than min	The number of DHCPOFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system.
Lease greater than max	The number of DHCPOFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system.
IP Validation failed	The number of DHCPOFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context.
XID mismatch:	The number of DHCPOFFER messages discarded by the system due to an XID mismatch.
DHCP ACK Discard Reasons: (dhcp-proxy)	
Parse error	The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
XID mismatch:	The number of DHCPACK messages discarded by the system due to an XID mismatch.
DHCP DECLINE Reasons: (dhcp-proxy)	
IP mismatch	The number of DHCP DECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER.
IP Lease Renewals	The number of address lease renewal requests successfully processed.
DHCP Call Type	Type of DHCP call.

Field	Description
DHCP State	Status of DHCP call. • Bound : Call Established • Renewing: Call renewing after expiry of leased time. • Rebinding: Making call for same call id after expiry of
Lease time received	Time in seconds allotted for a specific call-Id.
Lease time remaining	Time in seconds available for a specific call-Id.

show dhcp chaddr

Table 212. show dhcp chaddr Command Output Descriptions

Field	Description
User Name	The user name associated with this session.
User Address	The IP address of the user's PDP context in dotted decimal notation.
DHCP Service	The DHCP service name.
Server Address	The server address.
DHCP Call Type	The DHCP call type.
DHCP State	The DHCP state.
Lease time received	The IP address lease time received.
Lease time remaining	The IP address lease time remaining.
Total DHCP sessions matching specified criteria	The total number of DHCP sessions matching specified criteria.

show dhcp dhcp-service

Table 213. show dhcp dhcp-service Command Output Descriptions

Field	Description
Session Counters	
Total Current	The total number of currently active PDP contexts on the system that received DHCP-assigned IP addresses as facilitated by the specified criteria.
DHCP Proxy	The total number of PDP contexts that were assigned IP addresses using the DHCP Proxy method.
DHCP Relay Agent	The total number of PDP contexts that were assigned IP addresses using the DHCP Relay method.
DHCP Messages	
DISCOVER TX	The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER retransmitted	The number of DHCPDISCOVER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER relayed	The number of DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay method.
OFFER RX	The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER Discarded	The number of DHCPOFFER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER relayed	The number of DHCPOFFER messages relayed by the system to the mobile as part of the DHCP Relay method.
REQUEST TX	The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST retransmitted	The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST relayed	The number of DHCPREQUEST messages relayed by the system to the mobile as part of the DHCP Relay method.
ACK RX	The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method.
ACK for INFORM	The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
ACK relayed	The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method.
NAK RX	The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method.
NAK for INFORM	The number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.

Field	Description
NAK relayed	The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method.
DECLINE relayed	The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method.
RELEASE relayed	The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method.
INFORM relayed	The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method.
DHCP OFFER Discard Reasons	
Parse error	The number of DHCP OFFER messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
Lease less than min	The number of DHCP OFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system.
Lease greater than max	The number of DHCP OFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system.
IP Validation failed	The number of DHCP OFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context.
DHCP ACK Discard Reasons: (dhcp-proxy)	
Parse error	The number of DHCP ACK messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
DHCP DECLINE Reasons: (dhcp-proxy)	
IP mismatch	The number of DHCPDECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER.
IP Lease Renewals	The number of address lease renewal requests successfully processed.

show dhcp msid

Table 214. show dhcp msid Command Output Descriptions

Field	Description
User Name	The user name associated with this session.
User Address	IP address of the user's PDP context in dotted decimal notation.
DHCP Service	The DHCP service name.
Server Address	The server address.
DHCP Chaddr of MS	The Client Hardware (MAC) Address (CHADDR) of MS.
DHCP Call Type	The DHCP call type.
DHCP State	The DHCP state.
Lease time received	The IP address lease time received.
Lease time remaining	The IP address lease time remaining.
Total DHCP sessions matching specified criteria	The total number of DHCP sessions matching specified criteria.

show dhcp full msid

Table 215. show dhcp full msid Command Output Descriptions

Field	Description
User Name	The user name associated with this session.
User Address	IP address of the user's PDP context in dotted decimal notation.
DHCP Service	The DHCP service name.
Server Address	The server address.
DHCP Call Type	The DHCP call type.
DHCP State	The DHCP status.
Lease time received	Time allotted in seconds.
Lease time remaining	Time available in seconds.
DHCP Messages:	
DISCOVER TX	The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER retransmitted	The number of DHCPDISCOVER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER RX	The number of DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER retried RX	The number of retried DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER relayed	The number of DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay method.
OFFER RX	The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER Discarded	The number of DHCPOFFER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER TX	The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER relayed	The number of DHCPOFFER messages relayed by the system to the mobile as part of the DHCP Relay method.
REQUEST TX	The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST retransmitted	The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.

Field	Description
REQUEST RX	The number of DHCPREQUEST messages received by the system as part of the DHCP Proxy method.
REQUEST renewal RX	The number of DHCPREQUEST renewal messages received by the system as part of the DHCP Proxy method.
REQUEST relayed	The number of DHCPREQUEST messages relayed by the system to the mobile as part of the DHCP Relay method.
ACK RX	The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method.
ACK for INFORM	The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
ACK TX	The number of DHCPACK messages send to the DHCP server as part of the DHCP Proxy method.
ACK Renewing TX	The number of DHCPACK messages renewed from the DHCP server as part of the DHCP Proxy method.
ACK relayed	The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method.
NAK RX	The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method.
NAK for INFORM	The number of number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
NAK TX	The number of DHCPNAK messages sent to the DHCP server as part of the DHCP Proxy method.
NAK relayed	The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method.
DECLINE relayed	The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method.
RELEASE relayed	The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method.
INFORM relayed	The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method.

DHCP OFFER Discard Reasons: (dhcp-proxy)

Parse error	The number of DHCP OFFER messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
Lease less than min	The number of DHCP OFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system.
Lease greater than max	The number of DHCP OFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system.

Field	Description
IP Validation failed	The number of DHCPOFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context.
DHCP ACK Discard Reasons: (dhcp-proxy)	
Parse error	The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
DHCP DECLINE Reasons: (dhcp-proxy)	
IP mismatch	The number of DHCP DECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER.
IP Lease Renewals	The number of address lease renewal requests successfully processed.
Session Counters:	
Total Current	The total number of currently active sessions on the system that received DHCP-assigned IP addresses.
DHCP Proxy	The total number of sessions that were assigned IP addresses using the DHCP Proxy method.
DHCP Relay Agent	The total number of sessions that were assigned IP addresses using the DHCP Relay method.
DHCP Server	The DHCP server's IP address.
Total DHCP sessions matching specified criteria	The total number of DHCP sessions matching the specified criteria.

show dhcp status

Table 216. show dhcp status Command Output Descriptions

Field	Description
DHCP Type	Indicates the type of DHCP service active. Possible types are: • (P) - DHCP Proxy • (R) - DHCP Relay • (S) - DHCP Server • (u) - unknown call
Lease State	The lease state for the DHCP service.
DHCP Service	The name of the DHCP service.
DHCP Server	The IP address of DHCP server.
Status	Indicates the status of the DHCP server. Possible status are: • Up • Active
Current Leased Address	The total number of DHCP Relay-assigned IP addresses currently leased to this service.
Total Leased Address	The total number of DHCP Relay-assigned IP addresses available for this service.

show dhcp-service

Table 217. show dhcp-service name Command Output Descriptions

Field	Description
Service name	The DHCP service name.
Context	The context name.
Bind	Indicates the bind status.
Local IP Address	The IP address of DHCP server.
Next Hop Address	Indicates the nexthop-forwarding address configured in DHCP service for MPLS traffic.
DHCP Subnet mask used	Indicates the host mask.
MPLS-label	Indicates the MPLS labels configured in DHCP service for MPLS traffic.
Service Status	Indicates the service status, whether started or not.
Retransmission Timeout	The retransmission timeout period that must pass with no response before the system re-attempts to communicate with the DHCP server, in milliseconds.
Max Retransmissions	The maximum number of times that the system attempts to communicate with unresponsive DHCP server before it is considered a failure.
Lease Time	The lease time, in seconds.
Minimum Lease Duration	The minimum allowable lease duration accepted in responses from DHCP servers, in seconds.
Maximum Lease Duration	The maximum allowable lease duration accepted in responses from DHCP servers, in seconds.
DHCP Dead Time	The DHCP deadtime, in seconds, indicating the time period that the system waits prior to re-communicating with a DHCP server that was previously marked as down.
DHCP Dead consecutive Failure	The number of consecutive failures for the to be declared dead.
DHCP T1 Threshold Timer	The DHCP T1 threshold timer indicating the percentage of the allocated IP address lease time at which the DHCP call-line state is changed to “RENEWING”.
DHCP T2 Threshold Timer	The DHCP T2 threshold timer indicating the percentage of the allocated IP address lease time at which the DHCP call-line state is changed to “REBINDING”.
DHCP Client Identifier	Indicates the behavior relating to inclusion of client identifier DHCP option in DHCP messages. Possible values are: • msisdn • none.
DHCP Algorithm	The algorithm used to select DHCP servers with which to communicate when multiple servers are configured.

Field	Description
DHCP Servers configured	The IP address and priority information of the DHCP servers configured.
VRF Name	Indicates the name of the virtual routing and forwarding context instance associated with this DHCP service. Note: For DHCP over MPLS feature to work in StarOS 9.0 onward VRF context must be associated in DHCP service. Without this association the DHCP service using MPLS labels will not be started.
Input	Indicates the MPLS labels configured in DHCP service for inward MPLS traffic. Note: For DHCP over MPLS feature to work in StarOS 9.0 onward VRF context must be associated in DHCP service. Without this association the DHCP service using MPLS labels will not be started.
Output	Indicates the MPLS labels configured in DHCP service for outward MPLS traffic.
DHCP server rapid-commit	Indicates if the rapid commit option is enabled/disabled for DHCP server.
DHCP client rapid-commit	Indicates if the rapid commit option is enabled/disabled for DHCP clients.
DHCP server check msg size	Indicates if the checking of message size is enabled/disabled for DHCP messages sent from server to client.
DHCP relay agent option	Indicates if the DHCP relay agent option is enabled/disabled.
DHCP chaddr validation	Indicates the behavior of the client hardware address (chaddr) validation in DHCP messages.

show dhcp statistics

Table 218. show dhcp statistics Command Output Descriptions

Field	Description
Session Stats	
Total Current	The total number of currently active sessions on the system that received DHCP-assigned IP addresses.
DHCP Proxy	The total number of currently active sessions that were assigned IP addresses using the DHCP Proxy method.
DHCP Relay Agent	The total number of currently active sessions that were assigned IP addresses using the DHCP Relay method.
DHCP Server	The total number of currently active sessions that were assigned IP addresses using the DHCP Server.
Total Setup	The cumulative total number of sessions facilitated by the system that received DHCP-assigned IP addresses.
DHCP Proxy	The cumulative total number of sessions facilitated by the system that were assigned IP addresses using the DHCP Proxy method.
DHCP Relay Agent	The cumulative total number of sessions facilitated by the system that were assigned IP addresses using the DHCP Relay method.
DHCP Server	The cumulative total number of sessions facilitated by the system that were assigned IP addresses using the DHCP Server.
Total Released	The total number of IP addresses that have been returned to the DHCP server(s).
Session Release Reasons: (dhcp-proxy)	
Admin Releases	The number of DHCP Proxy-assigned IP addresses released due to administrative intervention.
Bearer Call Terminated	The number of DHCP Proxy-assigned IP addresses released due to session termination.
Lease Exp Policy	The number of DHCP Proxy-assigned IP addresses released due to the expiration of the address lease policy.
Lease Renew Failure	The number of DHCP Proxy-assigned IP addresses released due to a failure experienced during lease renewal.
IP Address mismatch	The number of DHCP Proxy-assigned IP addresses released due to the offering of an invalid IP address.
Lease time mismatch	The number of DHCP Proxy-assigned IP addresses released due to the offering of an unacceptable lease time.
Chaddr mismatch	The number of DHCP Proxy-assigned IP addresses released due to the mis-match in client hardware address (MAC) or unknown/invalid client hardware address.
Client-identifier mis-match	The number of DHCP Proxy-assigned IP addresses released due to the mis-match in client id or unknown/invalid client id.
Other Reasons	The number of DHCP Proxy-assigned IP addresses released due to reasons other than those listed here.

Field	Description
Session Release Reasons: (dhcp-relay)	
Admin Releases	The number of DHCP Relay-assigned IP addresses released due to administrative intervention.
Bearer Call Terminated	The number of DHCP Relay-assigned IP addresses released due to session termination.
Lease Timed-out	The number of DHCP Relay-assigned IP addresses released due to the expiration of the address lease.
Other Reasons	The number of DHCP Relay-assigned IP addresses released due to reasons other than those listed here.
Session Release Reasons: (dhcp-local-server)	
Admin Releases	The number of DHCP local-server-assigned IP addresses released due to administrative intervention.
Bearer Call Terminated	The number of DHCP local-server-assigned IP addresses released due to session termination.
Lease Timed-out	The number of DHCP local-server-assigned IP addresses released due to the expiration of the address lease.
Other Reasons	The number of DHCP local-server-assigned IP addresses released due to reasons other than those listed here.
DHCP Messages	
DISCOVER TX	The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER retransmitted	The number of DHCPDISCOVER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER RX	The number of DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER retried RX	The number of retried DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER relayed	The number of DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay method.
DISCOVER retransmitted relayed	The number of retransmitted DHCPDISCOVER messages relayed by the system to the mobile as part of the DHCP Relay
OFFER RX	The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER Discarded	The number of DHCPOFFER messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER relayed	The number of DHCPOFFER messages relayed by the system to the mobile as part of the DHCP Relay method.
REQUEST TX	The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST retransmitted	The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST relayed	The number of DHCPREQUEST messages relayed by the system to the mobile as part of the DHCP Relay method.

Field	Description
REQUEST renewing relayed	The number of DHCPREQUEST renewal messages relayed by the system to the mobile as part of the DHCP Relay method.
ACK RX	The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method.
ACK for INFORM	The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
ACK Renewing RX	The number of DHCPACK renewal messages received from the DHCP server as part of the DHCP Proxy method.
ACK TX	The number of DHCPACK messages sent to the DHCP server as part of the DHCP Proxy method.
ACK Renewing TX	The number of DHCPACK renewal messages sent to the DHCP server as part of the DHCP Proxy method.
ACK relayed	The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method.
ACK renewing relayed	The number of DHCPACK renewal messages relayed by the system to the mobile as part of the DHCP Relay method.
NAK RX	The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method.
NAK for INFORM	The number of number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
NAK TX	The number of DHCPNAK messages sent to the DHCP server as part of the DHCP Proxy method.
NAK relayed	The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method.
DECLINE TX	The number of DHCPDECLINE messages sent by the system to the DHCP server as part of the DHCP Proxy method.
DECLINE RX	The number of DHCPDECLINE messages received from the DHCP server as part of the DHCP Proxy method.
DECLINE relayed	The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method.
RELEASE TX	The number of DHCPRELEASE messages sent by the system to the DHCP server as part of the DHCP Proxy method.
RELEASE RX	The number of DHCPRELEASE messages received from the DHCP server as part of the DHCP Proxy method.
RELEASE relayed	The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method.
RELEASE for relay call	The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method.
INFORM TX	The number of DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
INFORM retransmitted	The number of DHCPINFORM messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.

Field	Description
INFORM RX	The number of DHCPINFORM messages received from the DHCP server as part of the DHCP Proxy method.
INFORM relayed	The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method.
DHCP OFFER Discard Reasons:	
Parse error	The number of DHCPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
Lease less than min	The number of DHCPOFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system.
Lease greater than max	The number of DHCPOFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system.
IP Validation failed	The number of DHCPOFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context.
XID mismatch:	The number of DHCPOFFER messages discarded by the system due to an XID mismatch.
DHCP ACK Discard Reasons:	
Parse error	The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
XID mismatch:	The number of DHCPACK messages discarded by the system due to an XID mismatch.
DHCP DECLINE Reasons: (dhcp-proxy)	
IP mismatch	The number of DHCPDECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER.
DHCP DISCOVER Discard Reasons:	

Field	Description
Parse error	The number of DHCPDISCOVER messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
DHCP REQUEST Discard Reasons:	
Parse error	The number of DHCPREQUEST messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
DHCP RELEASE Discard Reasons:	
Parse error	The number of DHCPRELEASE messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
Renewal Statistics: (dhcp-proxy)	
IP Lease Renewals	The number of address lease renewal requests successfully processed.
Failed IP Lease Renewals	The number of address lease renewal requests for which failures occurred. This is the sum of the following errors: • No reply from server • Server NAK • IP address mis-match • Lease mismatch
No reply from server	The number of address lease renewal requests made for which there was no reply from the DHCP server within the stipulated time. The time required to wait for the server's response is described in RFC 2131, section 4.4.5.
Server NAK	The number of address lease renewal requests for which a negative acknowledgement was received from the server.
IP address mis-match	The number of address lease renewal requests for which there was an IP address mis-match condition- the IP Addresses assigned to the client (in the first ACK) and the IP address returned in the successive ACK (in response to lease renewal DHCPREQUEST) did not match.

Field	Description
Lease mis-match	The number of address lease renewal requests for which there was a lease time mis-match condition- to be lease returned in the first ACK was within the limits of the DHCP Service Configuration parameters, but the lease returned in the ACK (in response to lease renewal DHCP REQUEST) did not match.

show dhcp username

Table 219. show dhcp username Command Output Descriptions

Field	Description
User Name	The user name associated with this session.
User Address	IP address of the user's PDP context in dotted decimal notation.
DHCP Service	The DHCP service name.
Server Address	The server address.
DHCP Call Type	The DHCP call type.
DHCP State	The DHCP state.
Lease time received	The IP address lease time received.
Lease time remaining	The IP address lease time remaining.
Total DHCP sessions matching specified criteria	The total number of DHCP sessions matching specified criteria.

show dhcp full username

Table 220. show dhcp full username Command Output Descriptions

Field	Description
User Name	The user name associated with this session.
User Address	IP address of the user's PDP context in dotted decimal notation.
DHCP Service	The DHCP service name.
Server Address	The server address.
DHCP Chaddr of MS	The Client Hardware (MAC) Address (CHADDR) of MS.
Primary DNS Address	Specifies the primary Domain Name Server (DNS) IP address in IPv4 notation. NOTE: This is the DNS/NBNS value received from the DHCP server for the particular subscriber session sent to the subscriber in a GTP Create PDP Context Response message. If the DNS/NBNS value received from DHCP is not sent to the subscriber, nothing will be displayed.
Secondary DNS Address	Specifies the secondary Domain Name Server (DNS) IP address in IPv4 notation. NOTE: This is the DNS/NBNS value received from the DHCP server for the particular subscriber session sent to the subscriber in a GTP Create PDP Context Response message. If the DNS/NBNS value received from DHCP is not sent to the subscriber, nothing will be displayed.
Primary NBNS Address	Specifies the primary NetBIOS Name Server (NBNS) IP address in IPv4 notation. NOTE: This is the DNS/NBNS value received from the DHCP server for the particular subscriber session sent to the subscriber in a GTP Create PDP Context Response message. If the DNS/NBNS value received from DHCP is not sent to the subscriber, nothing will be displayed.
Secondary NBNS Address	Specifies the secondary NetBIOS Name Server (NBNS) IP address in IPv4 notation. NOTE: This is the DNS/NBNS value received from the DHCP server for the particular subscriber session sent to the subscriber in a GTP Create PDP Context Response message. If the DNS/NBNS value received from DHCP is not sent to the subscriber, nothing will be displayed.
DHCP Call Type	The DHCP call type.
DHCP State	The DHCP state.
Lease time received	The IP address lease time received.
Lease time remaining	The IP address lease time remaining.
DHCP Messages:	
DISCOVER TX	The number of DHCPDISCOVER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER retransmitted	The number of DHCPDISCOVER messages retransmitted by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER RX	The number of DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method.

Field	Description
DISCOVER retried RX	The number of retried DHCPDISCOVER messages received by the system to the DHCP server as part of the DHCP Proxy method.
DISCOVER relayed	The number of DHCPDISCOVER messages relayed by the system to the DHCP server as part of the DHCP Proxy method.
OFFER RX	The number of DHCPOFFER messages received by the system to the DHCP server as part of the DHCP Proxy method.
OFFER Discarded	The number of DHCPOFFER messages discarded by the system to the DHCP server as part of the DHCP Proxy method.
OFFER TX	The number of DHCPOFFER messages sent by the system to the DHCP server as part of the DHCP Proxy method.
OFFER relayed	The number of DHCPOFFER messages relayed by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST TX	The number of DHCPREQUEST messages sent by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST retransmitted	The number of DHCPREQUEST messages re-sent by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST RX	The number of DHCPREQUEST messages received by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST renewal RX	The number of DHCPREQUEST renewal messages received by the system to the DHCP server as part of the DHCP Proxy method.
REQUEST relayed	The number of DHCPREQUEST messages relayed by the system to the DHCP server as part of the DHCP Proxy method.
ACK RX	The number of DHCPACK messages received from the DHCP server as part of the DHCP Proxy method.
ACK for INFORM	The number of acknowledgements received for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
ACK TX	The number of DHCPACK messages sent to the DHCP server as part of the DHCP Proxy method.
ACK Renewing TX	The number of DHCPACK renewal messages sent to the DHCP server as part of the DHCP Proxy method.
ACK relayed	The number of DHCPACK messages relayed by the system to the mobile as part of the DHCP Relay method.
NAK RX	The number of DHCPNAK messages received from the DHCP server as part of the DHCP Proxy method.
NAK for INFORM	The number of negative acknowledgements for DHCPINFORM messages sent by the system to the DHCP server as part of the DHCP Proxy method.
NAK TX	The number of DHCPNAK messages sent to the DHCP server as part of the DHCP Proxy method.
NAK relayed	The number of DHCPNAK messages relayed by the system to the mobile as part of the DHCP Relay method.
DECLINE relayed	The number of DHCPDECLINE messages relayed by the system to the DHCP server as part of the DHCP Relay method.

Field	Description
RELEASE relayed	The number of DHCPRELEASE messages relayed by the system to the DHCP server as part of the DHCP Relay method.
INFORM relayed	The number of DHCPINFORM messages relayed by the system to the DHCP server on behalf of the mobile as part of the DHCP Relay method.
DHCP OFFER Discard Reasons: (dhcp-proxy)	
Parse error	The number of DHCPOFFER messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
Lease less than min	The number of DHCPOFFER messages discarded by the system due to the offered lease time being less than the minimum acceptable value configured on the system.
Lease greater than max	The number of DHCPOFFER messages discarded by the system due to the offered lease time being greater than the maximum acceptable value configured on the system.
IP Validation failed	The number of DHCPOFFER messages discarded by the system due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context.
DHCP ACK Discard Reasons: (dhcp-proxy)	
Parse error	The number of DHCPACK messages discarded by the system due to parsing errors in the OFFER message such as: • "magic cookie invalid" • missing "end" option • "xid" does not match xid of any outstanding requests • the message is a "short message"
DHCP DECLINE Reasons: (dhcp-proxy)	
IP mismatch	The number of DHCPDECLINE messages sent by the system due to a mismatch in the IP address returned in the OFFER and the IP address returned in ACK. A DECLINE message is sent for the IP address sent in the OFFER.
IP Lease Renewals	The number of address lease renewal requests successfully processed.
Session Counters	
Total Current	The total number of currently active sessions on the system that received DHCP-assigned IP addresses.
DHCP Proxy	The total number of currently active sessions that were assigned IP addresses using the DHCP Proxy method.
DHCP Relay Agent	The total number of sessions that were assigned IP addresses using the DHCP Relay method.
DHCP Server	The DHCP server's IP address.

Field	Description
Total DHCP sessions matching specified criteria	The total number of DHCP sessions matching specified criteria.

Chapter 90

show diameter

This chapter includes the **show diameter** command output tables.

show diameter aaa-statistics

Table 221. show diameter aaa-statistics Command Output Descriptions

Field	Description
Authentication Servers Summary	
Message Stats	Total Diameter session message statistics.
Total MA Requests	Total number of Multimedia-Auth-Requests.
Total MA Answers	Total number of Multimedia-Auth-Answers.
MAR - Retries	Total number of Multimedia-Auth-Request retries.
MAA Timeouts	Total number of Multimedia-Auth-Answer timeouts.
MAA - Dropped	Total number of Multimedia-Auth-Answer dropped.
Total SA Requests	Total number of Server-Assignment-Requests.
Total SA Answers	Total number of Server-Assignment-Answers.
SAR - Retries	Total number of Server-Assignment-Request retries.
SAA Timeouts	Total number of Server-Assignment-Answer timeouts.
SAA - Dropped	Total number of Server-Assignment-Answers dropped.
Total UA Requests	Total number of User-Authorization-Requests.
Total UA Answers	Total number of User-Authorization-Answers.
UAR - Retries	Total number of User-Authorization-Request retries.
UAA Timeouts	Total number of User-Authorization-Answer timeouts.
UAA - Dropped	Total number of User-Authorization-Answers dropped.
Total LI Requests	Total number of Location-Info-Requests.
Total LI Answers	Total number of Location-Info-Answers.
LIR - Retries	Total number of Location-Info-Request retries.
LIA Timeouts	Total number of Location-Info-Answer timeouts.
LIA - Dropped	Total number of Location-Info-Answers dropped.
Total RT Requests	Total number of Registration-Termination-Requests.
Total RT Answers	Total number of Registration-Termination-Answers.
RTR - Rejected	Total number of Registration-Termination-Requests rejected.
Total PP Requests	Total number of Push-Profile-Requests.
Total PP Answers	Total number of Push-Profile-Answers.

Field	Description
PPR - Rejected	Total number of Push-Profile-Requests rejected.
Total DE Requests	Total number of Diameter-EAP-Requests.
Total DE Answers	Total number of Diameter-EAP-Answers.
DEA - Accept	Total number of Diameter-EAP-Answers accepted.
DEA - Reject	Total number of Diameter-EAP-Answers rejected.
DER - Retries	Total number of Diameter-EAP-Request retries.
DEA Timeouts	Total number of Diameter-EAP-Answer timeouts.
DEA - Dropped	Total number of Diameter-EAP-Answer dropped.
Total AA Requests	Indicates the total number of AA (Authentication and/or Authorization) Request messages sent by P-GW on S6b interface to AAA Server/Proxy.
Total AA Answers	Indicates the total number of AA (Authentication and/or Authorization) Answer messages received by P-GW on S6b interface from AAA Server/Proxy.
AAR - Retries	Indicates the total number of AAR (AA Request) messages retransmitted by P-GW on S6b interface to AAA Server/Proxy.
AAA Timeouts	Indicates the total number of AAA (AA Answer) messages timed-out due to no response from AAA Server/Proxy.
AAA - Dropped	Indicates the total number of AAA (AA Answer) messages dropped due any reason from AAA Server/Proxy.
ASR	Total number of Abort-Session-Requests.
ASA	Total number of Abort-Session-Answers.
RAR	Total number of Re-Auth-Requests.
RAA	Total number of Re-Auth-Answers.
STR	Total number of Session-Termination-Requests.
STA	Total number of Session-Termination-Answers.
STR - Retries	Total number of Session-Termination-Request retries.
DE Message Error Stats	
Diameter Protocol Errs	Total number of Diameter protocol errors.
Bad Answers	Total number of bad answers.
Unknown Session Reqs	Total number of unknown session requests.
Unknown Command Code	Total number of unknown command codes.
Request Timeouts	Total number of request timeouts.
Parse Errors	Total number of parse errors.
Request Retries	Total number of request retries.

Field	Description
Session Stats	Diameter Session Statistics.
Total Sessions	Total number of sessions.
Freed Sessions	Total number of freed sessions.
Session Timeouts	Total number of session timeouts.
Active Sessions	Total number of active sessions.
STR Termination Cause Stats	Session-Termination-Request termination cause statistics.
Diameter Logout	Total number of Session-Termination-Request terminations due to Diameter logouts.
Service Not Provided	Total number of Session-Termination-Request terminations due to service not provided.
Bad Answer	Total number of Session-Termination-Request terminations due to bad answers.
Administrative	Total number of Session-Termination-Request terminations due to administrative reasons.
Link Broken	Total number of Session-Termination-Request terminations due to links broken.
Auth Expired	Total number of Session-Termination-Request terminations due to auth expiry.
User Moved	Total number of Session-Termination-Request terminations due to user moves.
Session Timeout	Total number of Session-Termination-Request terminations due to session timeouts.
User Request	Total number of Session-Termination-Request terminations due to user requests.
Lost Carrier	Total number of Session-Termination-Request terminations due to lost carriers.
Lost Service	Total number of Session-Termination-Request terminations due to lost service.
Idle Timeout	Total number of Session-Termination-Request terminations due to idle timeouts.
NAS Session Timeout	Total number of Session-Termination-Request terminations due to NAS session timeouts.
Admin Reset	Total number of Session-Termination-Request terminations due to admin resetting.
Admin Reboot	Total number of Session-Termination-Request terminations due to admin reboots.
Port Error	Total number of Session-Termination-Request terminations due to port errors.
NAS Error	Total number of Session-Termination-Request terminations due to NAS errors.
NAS Request	Total number of Session-Termination-Request terminations due to NAS requests.
NAS Reboot	Total number of Session-Termination-Request terminations due to NAS reboots.
Port Unneeded	Total number of Session-Termination-Request terminations due to unneeded ports.
Port Preempted	Total number of Session-Termination-Request terminations due to preempted ports.
Port Suspended	Total number of Session-Termination-Request terminations due to suspended ports.
Service Unavailable	Total number of Session-Termination-Request terminations due to unavailable service.
Callback	Total number of Session-Termination-Request terminations due to callback.
User Error	Total number of Session-Termination-Request terminations due to user errors.

Field	Description
Host Request	Total number of Session-Termination-Request terminations due to host requests.
Accounting Servers Summary	
Message Stats	Accounting message statistics.
Total AC Requests	Total number of AC-Requests.
Total AC Answers	Total number of AC-Answers.
ACR-Start	Total number of AC-Request starts.
ACA-Start	Total number of AC-Answer starts.
ACR-Start Retries	Total number of AC-Request start retries.
ACA-Start Timeouts	Total number of AC-Answer timeouts.
ACR-Interim	Total number of AC-Request interim.
ACA-Interim	Total number of AC-Answer interim.
ACR-Interim Retries	Total number of AC-Request interim retries.
ACA-Interim Timeouts	Total number of AC-Answer interim timeouts.
ACR-Event	Total number of AC-Request events.
ACA-Event	Total number of AC-Answer events.
ACR-Stop	Total number of AC-Request stops.
ACA-Stop	Total number of AC-Answer stops.
ACR-Stop Retries	Total number of AC-Request stop retries.
ACA-Stop Timeouts	Total number of AC-Answer stop timeouts.
ACA-Dropped	Total number of AC-Answers dropped.
AC Message Error Stats	Accounting message error statistics.
Diameter Protocol Errs	Total number of Diameter protocol errors.
Bad Answers	Total number of bad answers.
Unknown Session Reqs	Total number of unknown session requests.
Unknown Command Code	Total number of unknown command codes.
Request Timeouts	Total number of request timeouts.
Parse Errors	Total number of parse errors.
Request Retries	Total number of request retries.

show diameter authentication servers

Table 222.show diameter authentication servers Command Output Descriptions

Field	Description
Context Name	Name of the context in which the Diameter servers are configured.
AAA Group	Name of the AAA group.
Endpoint	Name of the Diameter endpoint.
Peer	Name of the Diameter server host.
No of Instance in UP state	The number of instances between Diameter server and AAA Manager in up state.
No of Instance in DOWN state	The number of instances between Diameter server and AAA Manager in down state.
Priority	The relative priority of this server considered when the system is selecting which Diameter server to use. Lower number has higher priority.
Message Sent/Queued	The number of messages sent/queued from Diameter server to AAA Manager.

show diameter endpoints all

Table 223. show diameter endpoints all Command Output Descriptions

Field	Description
Context	Name of the configured context.
Endpoint	Name of the endpoint.
Realm	Domain (Realm) name for subscriber.
Task	Task running on ACSMgr or AAAMgr.
CPU	Indicates the Card and CPU number.
Application	Indicates the application running on ACSMgr or AAAMgr.
Total endpoints matching specified criteria	Indicates the total number of matching endpoints.

show diameter message-queue counters outbound endpoint

Table 224. show diameter message-queue counters outbound endpoint Command Output Descriptions

Field	Description
Context	Name of the configured context.
Endpoint	Name of the endpoint.
Peer Host	Name of the peer host.
Peer Realm	Name of the peer realm.
Accounting-Answer	The number of outbound Accounting-Answer messages for the specified endpoint.
Accounting-Request	The number of outbound Accounting-Request messages for the specified endpoint.
Abort-Session-Answer	The number of outbound Abort-Session-Answer messages for the specified endpoint.
Abort-Session-Request	The number of outbound Abort-Session-Request messages for the specified endpoint.
Authorization-Authentication-Ans	The number of outbound Authorization-Authentication-Ans messages for the specified endpoint.
Authorization-Authentication-Req	The number of outbound Authorization-Authentication-Req messages for the specified endpoint.
Capabilities-Exchange-Answer	The number of outbound Capabilities-Exchange-Answer messages for the specified endpoint.
Capabilities-Exchange-Request	The number of outbound Capabilities-Exchange-Request messages for the specified endpoint.
Credit-Control-Answer	The number of outbound Credit-Control-Answer messages for the specified endpoint.
Credit-Control-Request	The number of outbound Credit-Control-Request messages for the specified endpoint.
Device-Watchdog-Answer	The number of outbound Device-Watchdog-Answer messages for the specified endpoint.
Device-Watchdog-Request	The number of outbound Device-Watchdog-Request messages for the specified endpoint.
Diameter-EAP-Answer	The number of outbound Diameter-EAP-Answer messages for the specified endpoint.
Diameter-EAP-Request	The number of outbound Diameter-EAP-Request messages for the specified endpoint.
Disconnect-Peer-Answer	The number of outbound Disconnect-Peer-Answer messages for the specified endpoint.
Disconnect-Peer-Request	The number of outbound Disconnect-Peer-Request messages for the specified endpoint.
Location-Info-Answer	The number of outbound Location-Info-Answer messages for the specified endpoint.
Location-Info-Request	The number of outbound Location-Info-Request messages for the specified endpoint.
Multimedia-Auth-Answer	The number of outbound Multimedia-Auth-Answer messages for the specified endpoint.
Multimedia-Auth-Request	The number of outbound Multimedia-Auth-Request messages for the specified endpoint.
Profile-Update-Answer	The number of outbound Profile-Update-Answer messages for the specified endpoint.

Field	Description
Profile-Update-Request	The number of outbound Profile-Update-Request messages for the specified endpoint.
Push-Profile-Answer	The number of outbound Push-Profile-Answer messages for the specified endpoint.
Push-Profile-Request	The number of outbound Push-Profile-Request messages for the specified endpoint.
Re-Auth-Answer	The number of outbound Re-Auth-Answer messages for the specified endpoint.
Re-Auth-Request	The number of outbound Re-Auth-Request messages for the specified endpoint.
Registration-Termination-Answer	The number of outbound Registration-Termination-Answer messages for the specified endpoint.
Registration-Termination-Request	The number of outbound Registration-Termination-Request messages for the specified endpoint.
Server-Assignment-Answer	The number of outbound Server-Assignment-Answer messages for the specified endpoint.
Server-Assignment-Request	The number of outbound Server-Assignment-Request messages for the specified endpoint.
Session-Termination-Answer	The number of outbound Session-Termination-Answer messages for the specified endpoint.
Session-Termination-Request	The number of outbound Session-Termination-Request messages for the specified endpoint.
User-Authorization-Answer	The number of outbound User-Authorization-Answer messages for the specified endpoint.
User-Authorization-Request	The number of outbound User-Authorization-Request messages for the specified endpoint.
User-Data-Answer	The number of outbound User-Data-Answer messages for the specified endpoint.
User-Data-Request	The number of outbound User-Data-Request messages for the specified endpoint.
Total peers matching specified criteria	Indicates the total number of matching peers.

show diameter peers full all

Table 225. show diameter peers full all Command Output Descriptions

Field	Description
Context	Name of the context.
Endpoint	Name of the endpoint.
Inbound listening sockets	Displays listening Diameter interface; ports information when origin-host is configured as of “accept-inbound” connection type. If no inbound sockets are present these fields are not displayed.
Local Host	Name of the local host.
Local Address	IP address and port number of the local host.
Endpoint	Name of the endpoint.
Task	The task instance running on ACSMgr or AAAMgr.
Peer Hostname	Name of the peer host.
Local Hostname	Name of the local host.
Peer Realm	Peer domain (realm) name for Subscriber.
Local Realm	Local domain (realm) name for Subscriber.
Peer Address	Address of peer domain (realm).
Local Address	Address of local domain (realm).
State	Indicates the connection status.
CPU	The Card and CPU number.
Messages Out/Queued	The number of messages sent out/queued.  Important: Release 12.0 onwards, this statistic will not indicate the count of outstanding messages for Diameter proxy peers.
Task	The task running on ACSMgr or AAAMgr.
Supported Vendor IDs	The supported vendor IDs.
Admin Status	Indicates the admin status. Whether the user can administratively disable a peer while still preserving its configuration.
DPR Disconnect	Disconnect-Peer-Request disconnect cause.
Total peers matching specified criteria	The total number of peers matching the criteria.

show diameter statistics

Table 226. show diameter statistics Command Output Descriptions

Field	Description
Connection statistics	
Connection attempts	The total number of connections attempted.
Connection failures	The total number of connections failed.
Connection reads	The total number of connections read.
Connection starts	The total number of connections started.
Connection disconnects	The total number of connections disconnected.
Connection closes	The total number of connections closes.
Connection DHOST requests	The total number of connections with DHOST requested.
Connection DHOST removes	The total number of connections with DHOST removed.
Connection Timeouts	The total number of connections timed out.
Tc Expire Connection Attempts	The total number of connections attempted due to Tc timer expired. Note: The Tc timer controls the frequency that transport connection attempts are done to a peer with whom no active transport connection exists.
Tw Expire Connection Closes	The total number of connections closed due to Tw timer expired.
Tx Expire	On the expiry of application level timer (Tx/Pending timeout), the application like Gy and Gx will decide what failure handling has to be taken for the message sent to the server. This stats will be incremented if this application level Tx timer expires.
Application initiated Retries	If the application determines a failure on one connection on which the request message was sent to, it will retry the message to an alternate server if available. This stats will be used if the application decides to retry the message to alternate server.
Connection failure statistics	
Connection bind errors	The total number of connections failed during binding errors.
Connection connect errors	The total number of connections failed during connect errors.
Connection address errors	The total number of connections failed due to address errors.

Field	Description
Connection misc errors	The total number of connections failed due to other errors not mentioned in output.
Connection DHOST errors	The total number of connections failed due to DHOST errors.
Capabilities Exchange Request and Answers statistics	
Connection CER sent	The total number of Capabilities Exchange Request (CER) messages sent for connection.
Connection CER send errors	The total number of connections failed due to errors during CER messages sent.
CERs received	The total number of CER messages received.
Connection CER create failures	The total number of connections failed during CER message creation.
CEAs received	The total number of Capabilities Exchange Answer (CEA) messages received.
CEA AVPs unknown	The total number of unknown Attribute Value Pairs (AVPs) related to CEA message.
CEA Application ID mismatch	The total number of CEA Application ID mismatch.
Read CEA Messages	The total number of READ messages for CEA.
Read CEA Messages Unexpected	The total number of unexpected READ messages for CEA.
Read CEA Missing	The total number of missing READ messages for CEA.
Read CEA Negotiation Failure	The total number of failures in READ messages negotiation for CEA.
Read CER Messages	The total number of READ messages for CER.
Read CER Messages Unexpected	The total number of unexpected READ messages for CER.
Read CER Missing	The total number of missing READ messages for CER.
Tw Expire Waiting for CEA	The total number of CEAs waiting for answer due to Tw timer expired. NOTE: The Tw timer controls the changing of a peer to the SUSPECT state when no answer is received to a watchdog request.
Device Watchdog Requests and Answers statistics	
DWA attempts	The total number of attempts for Device Watchdog Answer (DWA).
DWA handle allocation failures	The total number of failures to handle allocation of DWA.
DWAs sent	The total number of DWA messages sent.
DWR send errors	The total number of errors while sending DWR messages.

Field	Description
Read DWA Messages	The total number of READ messages for DWA.
Read DWA Messages Unexpected	The total number of unexpected READ messages for DWA.
Read DWR Messages	The total number of missing READ messages for DWR.
Tw Expire Send DWR	The total number of DWRs sent due to Tw timer expired.
Send DWR Attempts	The total number of attempts to send 'DWR Sent' messages.
Send DWR Send Errors	The total number of errors while sending 'DWR Sent' messages.
Send DWR Calls	The total number of calls for 'DWR Sent' messages.
Send DWR MH Errors	The total number of message handling errors for 'DWR Sent' messages.
Disconnect Peer Request and Answers statistics	
DPRs Sent	If the diameter base protocol decides to close a connection, it will send a Disconnect-Peer-Request (DPR) to the server to notify the reason for disconnection. This statistics will be incremented when diameter base protocol sends a DPR to the system.
DPAs Received	This statistics will be incremented for the reception of Answer message the server responded for the Disconnect-Peer-Request that was sent earlier.
DPR attempts	This statistics will be incremented when the diabase base protocol decides to send a Disconnect-Peer-Answer to the server as a response to the Disconnect-Peer-Request that was sent earlier. This will be the same as "DPAs Sent" statistics if there is no failure in sending the DPA out.
DPAs Sent	This statistics will be incremented if a Disconnect-Peer-Answer is sent to the server as a response to the Disconnect-Peer-Request that was sent earlier. This will happen in case of server initiated connection closure. This will be the same as "DPR attempts" statistics if there is no failure in sending the DPA out.
DPR send errors	When a DPR is sent out for connection closure and if the sending of DPR is failed due to some connection issue, this statistics will be incremented.
DPA Message handle allocation	When a DPA is sent out for connection closure and if the sending of DPA is failed due to failure in creating the DPA message, this statistics will be incremented.
DPR error immclose	When a DPA is sent out for connection closure and if the sending of DPA is failed due to failure in creating the DPA message, the connection will be closed immediately. This statistics is incremented for those immediate closures without sending a DPA.
Read DPR Messages	This statistics will be incremented when the DPR request received from the server is successfully parsed.
DPA No Host Error	This statistics will be incremented if a DPR message is received without including Origin-Host AVP.
Create Messages statistics	
Calls	The total number of calls for 'Create' message.
Success	The total number of messages successful for 'Create' message.

Field	Description
Routed	The total number of messages routed for 'Create' message.
Directed	The total number of messages directed for 'Create' message.
Buffer Errors	The total number of errors for 'Create' message buffer.
Peer Never Up Errors	The total number of errors due to peer failure for 'Create' message.
Window Errors	The total number of errors due to 'Create' message window.
Unsupported Application Errors	The total number of errors due to unsupported applications for 'Create' message.
Message Parse statistics	
Message Pool Expand Attempts	The total number of attempts for message pool expansion.
Buffer Expand Attempts	The total number of attempts for buffer expansion.
Calls	The total number of calls for message parsing.
Too Many AVP Errors	The total number of message parsed having excessive AVP errors.
Header Errors	The total number of message parsed having header errors.
AVP Unknown Errors	The total number of message parsed having unknown AVP errors (errors not listed here).
Runt Errors	The total number of message parsed having runtime errors.
AVP Header Errors	The total number of message parsed having AVP header errors.
Message Protocol Error	The total number of message parsed having protocol errors.
Mand AVP Unknown Errors	The total number of message parsed having unknown errors for mandatory AVP.
Message aborts	The total number of message aborted during parsing.
Send Message statistics	
Calls	The total number of calls for 'Send' message.
Truncated Errors	The total number of truncated errors for 'Send' message.
Read Statistics	
Read Bytes	The total number of bytes read.
Read Messages Total	The total number of 'Read' messages.
Requests Read	The total number of requests for 'Read' messages.
Requests Timed Out	The total number of requests timed out for 'Read' messages.
Answers Read	The total number of answers read for 'Read' messages.

Field	Description
Answers Timed Out	The total number of answers timed out for 'Read' messages.
Read Application Messages	The total number of 'Read application' messages.
Unexpected Answers Read	The total number of unexpected answers for 'Read' messages.
Read Parse statistics	
Begin	The total number of parsing begins for 'Read' message.
E2E Errors	The total number of End-to-End (E2E) errors during parsing of 'Read' message.
Success	The total number of successful parsing of 'Read' message.
Application ID Errors	The total number of errors with Application Id during parsing of 'Read' message.
Command/Flag Errors	The total number of command or flag errors during parsing of 'Read' message.
Diameter Protocol Errors	The total number of Diameter protocol errors during parsing of 'Read' message.
Errors	The total number of errors during parsing of 'Read' message.
Length Padding Errors	The total number of 'Length Padding' errors during parsing of 'Read' message.
H2H Errors	The total number of Host-to-Host (H2H) errors during parsing of 'Read' message.
Length Too Long	The total number of message parsed having excessive length of 'Read' message.
Command Unknown	The total number of message parsed having unknown command in 'Read' message.
Length Sanity Errors	The total number of message parsed having invalid length of 'Read' message.
Length-v-SCTP EOR Errors	The total number of "Length-v-SCTP EOR" errors during parsing of "Read" message.
SCTP Missing EOR Errors	The total number of "SCTP Missing EOR" errors during parsing of "Read" message.
Write statistics	
total	The total number of calls for 'Write' message.
while OPEN	The total number of calls for 'Write' message while connection is OPEN.
while IDLE	The total number of calls for 'Write' message while connection is IDLE.
in other states	The total number of calls for 'Write' message while connection state is other than OPEN or IDLE state.
backpressure events	The total number of Write messages over the maximum number of outstanding messages to queue.
Written bytes	The total number of bytes written.
iterations	The total number of write iterations.
Written messages	The total number of messages written.

Field	Description
EOFs	The total number of 'Write' messages with End-of-File (EOFs).
errors	The total number of 'Write' message with errors.
Peer Calls statistics	
Open Calls	The total number of calls to open a peer.
Close Calls	The total number of calls to close a peer.
Open New Peer	The total number of calls to open a new peer.
Open Unknown Peer Errors	The total number of calls to open an unknown peer.
Open Misses	The total number of missed attempts to open a peer.
Route statistics	
Adds	The total number of routes added.
Expires	The total number of routes expired.
Hits	The total number of hits to a route.
Misses	The total number of routes missed.
Indirects	The total number of indirect route.
Installs	The total number of redirected routes installed.
Dynamic Route statistics	
Adds	The total number of dynamic routes added.
Add Failures	The total number of failures in adding dynamic routes.
Removes	The total number of dynamic routes removed.
Hits	The total number of hits to a dynamic route.
Expires	The total number of dynamic routes expired.
Latency statistics	
Last Round Trip Time (ms)	The last round trip time, in milliseconds.
Average Round Trip Time (ms)	The average round trip time in milliseconds.
Redirect Host Usage:	
Redirected Host	The number of times the host is redirected.
Redirect Not Cached	The number of times the redirected host is not cached.
Redirect All Session	The number of times all messages within the session are sent to Redirect-Host.
Redirect All Realm	The number of times all messages destined to Realm are sent to Redirect-Host.

Field	Description
Redirect Realm and Application	The number of times the messages for application requested to Realm are sent to Redirect-Host.
Redirect All Application	The number of times all messages for application are sent to Redirect-Host.
Redirect All Host	The number of times the messages sent to Redirect-Host AVP value instead of Redirect-Host value sent by the host.
Redirect All User	The number of times the message for user sent to Redirect-Host value.
Diameter DNS Statistics	
DNS Init	The total number of times an application (diabase/proxy) initialized an instance of a DNS library.
DNS De-Init	The total number of times an application (diabase/proxy) closed an instance of a DNS library.
VPN Init Request	The total number of init request messages sent to VPN managers from a library.
VPN Init Response	The total number of init response messages received from the VPN managers to a library.
VPN Init Success	The total number of init success messages received from the VPN managers to a library.
VPN Init Timeout	The total number of failed init responses received from the VPN managers to a library due to a timeout.
DNS A Requests	The total number of A-type (IPv4) requests sent to the VPN from the library.
DNS A Responses	The total number of A-type (IPv4) responses received by the library from the VPN.
DNS A Hits	The total number of A-type (IPv4) responses received by the library from the VPN with valid addresses.
DNS A Timeouts	The total number of A-type (IPv4) response failures due to timeout.
DNS AAAA Requests	The total number of AAAA-type (IPv6) requests sent to the VPN from the library.
DNS AAAA Responses	The total number of AAAA-type (IPv6) responses received by the library from the VPN.
DNS AAAA Hits	The total number of AAAA-type (IPv6) responses received by the library from the VPN with valid addresses.
DNS AAAA Timeouts	The total number of AAAA-type (IPv6) response failures due to timeout.
DNS NAPTR Requests	The total number of Naming Authority Pointer requests sent to the VPN from the library.
DNS NAPTR Responses	The total number of Naming Authority Pointer responses received by the library from the VPN.
DNS NAPTR Hits	The total number of Naming Authority Pointer responses received by the library from the VPN with valid URIs.
DNS NAPTR Timeouts	The total number of Naming Authority Pointer response failures due to timeout.
DNS SRV Requests	The total number of Service Locator requests sent to the VPN from the library.
DNS SRV Responses	The total number of Service Locator responses received by the library from the VPN.

Field	Description
DNS SRV Hits	The total number of Service Locator responses received by the library from the VPN with valid locations.
DNS SRV Timeouts	The total number of Service Locator response failures due to timeout.
A Type App Request	The total number of A-type requests made by the application to the library. Single application request can result in multiple library to VPN manager requests and vice versa.
AAAA Type App Request	The total number of AAAA-type requests made by the application to the library. Single application request can result in multiple library to VPN manager requests and vice versa.
NAPTR Type App Request	The total number of Naming Authority Pointer requests made by the application to the library. Single application request can result in multiple “library to VPN manager requests and vice versa.

Chapter 91

show dns-client

Table 227. `show dns-client statistics client <client_name>` Command Output Descriptions

Field	Description
DNS Usage Statistics	
Query Type	The type of DNS queries performed. Possible type of DNS queries are: A: The total A (IPv4 address record) type of queries. SRV: The total SRV (service locator) type of queries. AAAA: The total AAAA (IPv6 address record) type of queries. NAPTR: The total NAPTR (Naming Authority Pointer) type of queries.
Attempts	The total number of DNS query of specific type attempted.
Successes	The total number of attempted and successful DNS query of specific type.
Failures	The total number of attempted but failed DNS query of specific type.
Total queries	The total number of queries including A, SRV, and NAPTR type of queries.
DNS Cache Statistics	
Central Cache	The domain name lookups cached in central (remote) location.
Local Cache	The domain name lookups cached in local location.
Total Lookups	The total domain name lookups cached in central (remote) and local location.
Cache Hits (Positive Response)	The total number of hits with positive response.
Cache Hits (Negative Response)	The total number of hits with negative response.
Not Found in Cache	The total number of hits which have no record in central or local cache memory.
Hit Ratio (Percentage)	The percentage of domain records hit and found in central or local cache memory.
DNS Resolver Statistics	
Primary (or Secondary) Name Server	The IP address of the primary or secondary DNS (as specified by the display field title).
Query Type	The type of DNS queries performed. Possible type of DNS queries are: A: The total A (IPv4 address record) type of queries. SRV: The total SRV (service locator) type of queries. AAAA: The total AAAA (IPv6 address record) type of queries. NAPTR: The total NAPTR (Naming Authority Pointer) type of queries.
Attempts	The total number of DNS query of specific type attempted.
Successes	The total number of attempted and successful DNS query of specific type.
Failures	The total number of attempted but failed DNS query of specific type.

Field	Description
Total Resolver Queries	The total number of resolver queries made to the specified DNS of all query types.
Successful Queries	The total number of queries resolved successfully.
Query Timeouts	The total number of queries went timeout.
Domain Not Found	The total number of queries where domain name not found.
Connection Refused	The total number of queries for a domain for which connection refused.
Other Failures	The total number of queries failed due to reasons other than listed here.

Chapter 92

show dynamic-policy

This chapter includes the `show dynamic-policy` command output tables.

show dynamic-policy statistics

Table 228. show dynamic-policy statistics Command Output Descriptions

Field	Description
Dynamic Policy Stats	
PCC rule stats	
Install requests	Total number of Policy Control and Charging (PCC) rule install requests.
Remove requests	Total number of PCC rule removal requests.
Installed uplink	Total number of PCC rules installed for uplink direction.
Installed downlink	Total number of PCC rules installed for downlink direction.
Activate requests	Total number of PCC rule activate requests.
Deactivate requests	Total number of PCC rule deactivate requests.
Activate group	Total number of policy groups activated.
Deactivate group	Total number of policy groups deactivated.
PCC rule failure stats	
Install failure	Total number of PCC rule install failures.
Remove failure	Total number of PCC rule removal failures.
Activation failure	Total number of PCC rule activation failures.
Deactivation failure	Total number of PCC rule deactivation failures.
Group activation failure	Total number of policy group activation failures.
Group deactivation failure	Total number of policy group deactivation failures.
Event stats	
Session up	Total number of subscriber sessions up.
Session down	Total number of subscriber sessions down.
Handoff	Total number of handoffs occurred.
RAT change	Total number of Radio Access Type (RAT) changes occurred.
User location change	Total number of user location changes occurred.
Default Bearer QoS change	Total number of default bearer QoS changes occurred.
Flow create	Total number of flows created.
Flow delete	Total number of flows deleted.
Bearer loss	Total number of bearer loss.

Field	Description
Bearer recovery	Total number of bearer recoveries after loss of bearer.
Update tft	Total number of Traffic Flow Template (TFT) updates.
Update qos	Total number of QoS updates.
UE Time Zone change	Total number of UE time zone changes occurred.
Event failure stats	
Session up	Total number of session up failures.
Session down	Total number of session down failures.
Handoff	Total number of handoff failures.
RAT change	Total number of RAT change failures.
User location change	Total number of user location change failures.
Default Bearer QoS change	Total number of default bearer QoS change failures.
Flow create	Total number of flow creation failures.
Flow delete	Total number of flow deletion failures.
Bearer loss	Total number of bearer loss failures.
Bearer recovery	Total number of bearer recovery failures.
Update tft	Total number of TFT update failures.
Update qos	Total number of QoS update failures.
UE Time Zone change	Total number of UE time zone change failures.
Auth stats	
Auth request	Total number of authorization requests sent.
Auth failure	Total number of authorization request failures.
Reauth request	Total number of re-authorization requests sent.
Reauth request failure	Total number of re-authorization request failures.
Terminate request	Total number of terminate requests sent.
Terminate request failure	Total number of terminate request failures.

Chapter 93

show egtp

This chapter includes the **show egtp** command output tables.

show egtpc peers interface

Table 229. show egtpc peers interface Command Output Descriptions

Field	Description
Status	The status of the GTPC session. - A : Online/Active - I : Offline/Inactive
GTPC Echo	Displays whether GTPC echo is enable or not. - D : Disabled - E : Enabled
Restart Counter	Displays whether restart counter messages have been sent or not. - S : Sent - N : Not Sent
Peer Restart Counter	Displays the status of the peer restart counter. - K : Known - U : Unknown
Type of Node	Indicates the type of node with which the interface communicates. - S : SGW - P : PGW - M : MME - G : SGSN
Service ID	The Service ID for the eGTP service
Peer Address	Indicates the IP address of the peer service (MME/P-GW/S-GW).
Restart Counter	Indicates the restart counter value.
No. of restarts	Indicates the number of restarts of the peer node (MME/S-GW/P-GW).
Current sessions	Indicates the number of sessions currently active on eGTP service.
Max sessions	Indicates the total number of sessions allowed on this eGTP service.

show egtpc sessions

Table 230. show egtpc sessions Command Output Descriptions

Field	Description
vvvv	From left to right, the first value indicates the Interface Type. - M: MME Egress - P: PGW Ingress - S: SGW Ingress - vs: SGW Egress - G: SGSN Egress The second value indicates the PDN Type. - N: Non-Data Forwarding - F: Data Forwarding The fourth value is a string of characters that indicate the Bearer States. - A: Active - C: Create Session Pending - D: Delete Session Pending - d: Delete Bearer Pending - M: Modify Bearer Pending - R: Release Access Bearer Pending - L: Downlink Data Notification Pending - u: Update User Plane Pending - c: Create Bearer Pending - U: Update Bearer Pending - E: Delete Bearer Command Pending - B: Bearer Resource Command Pending
vvvv (cont.)	- m: Modify Bearer Command Pending - I: Create Indirect Data Forwarding Pending - i: Delete Indirect Forwarding Pending - t: Context Acknowledge Pending - T: Context Request Pending - F: Identification Request Pending - W: Forward Relocation Pending - X: Forward Access Context Notification Pending - w: Forward Relocation Complete Pending - r: Release Cancel pending - S: Suspend Pending - Y: Resume Pending - P: PS to CS Response Pending - p: PS to CS Complete Pending - Q: PS to CS Cancel Pending - .: Inactive
SVC ID	Displays the Service ID.
IMSI/MEI	Displays the IMSI or MEI number.
Def EBI	Displays the default EPS Bearer Identity

Field	Description
EBIs	EBI Bearer States (see fourth value indicators described above).
Control TEIDs	Lists the Tunnel Endpoint Identifiers (TEIDs)
Local	Local TEID.
Remote	Remote TEID.
CallID	Displays the Call Identifier.
Peer Address	Displays the IP address of the eGTP-C peer.
Total sessions matching specified criteria	Displays the total number of eGTP-C sessions matching the specified criteria.

show egtpc statistics

Table 231. show egtpc statistics Command Output Descriptions

Field	Description
Tunnel Management Messages	
Create Session Request	
Total TX	The total number of tunnel - create session request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - create session request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted create session request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted create session request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted create session request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted create session request messages received by this system, the specified service, or the specified interface.
Create Session Response	
Total TX	The total number of tunnel - create session response messages sent by this system, a specified service, or a specified interface.
Total RX	The total number of tunnel - create session response messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of tunnel - initially transmitted create session response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted create session response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of tunnel - initially transmitted create session request messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted create session response (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted create session response messages sent by this system, the specified service, or the specified interface.
Modify Bearer Request	
Total TX	The total number of tunnel - modify bearer request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - modify bearer request messages received by this system, the specified service, or the specified interface.

Field	Description
Initial TX	The total number of tunnel - initially transmitted modify bearer request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted modify bearer request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted modify bearer request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted modify bearer request messages received by this system, the specified service, or the specified interface.
Modify Bearer Response	
Total TX	The total number of tunnel - modify bearer response messages sent by this system, a specified service, or a specified interface.
Total RX	The total number of tunnel - modify bearer response messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of tunnel - initially transmitted modify bearer response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted modify bearer response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of tunnel - initially transmitted modify bearer request messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted modify bearer response (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted modify bearer response messages sent by this system, the specified service, or the specified interface.
Delete Session Request	
Total TX	The total number of tunnel - delete session request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - delete session request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted delete session request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted delete session request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted delete session request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted delete session request messages received by this system, the specified service, or the specified interface.
Delete Session Response	
Total TX Accepted Denied	The total number of tunnel - delete session response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - delete session response (accept or denied) messages sent by the system, the specified service, or the specified interface.

Field	Description
Total RX Accepted Denied	The total number of tunnel - delete session request messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - delete session response (accept or denied) messages received by the system, the specified service, or the specified interface.
Downlink Data Notification Request	
Total TX	The total number of tunnel - downlink data notification request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - downlink data notification request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted downlink data notification request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted downlink data notification request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted downlink data notification request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted downlink data notification request messages received by this system, the specified service, or the specified interface.
Downlink Data Notification Response	
Total TX	The total number of tunnel - downlink data notification response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - downlink data notification response messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of tunnel - initially transmitted downlink data notification response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted downlink data notification response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of tunnel - initially transmitted downlink data notification response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted downlink data notification response (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted downlink data notification response messages sent by the system, the specified service, or the specified interface.
Downlink Data Failure Indication	
Initial TX	The total number of tunnel - initially transmitted downlink data failure indication messages sent by this system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted downlink data failure indication messages received by this system, the specified service, or the specified interface.
Release Access Bearers Request	
Total TX	The total number of tunnel - release access bearers request messages sent by this system, the specified service, or the specified interface.

Field	Description
Total RX	The total number of tunnel - release access bearers request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted release access bearers request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted release access bearers request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted release access bearers request messages sent by this system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted release access bearers request messages received by this system, the specified service, or the specified interface.
Release Access Bearer Response	
Total TX	The total number of tunnel - release access bearer response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - release access bearer response messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of tunnel - initially transmitted release access bearer response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted release access bearer response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of tunnel - initially transmitted release access bearer response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted release access bearer response (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted release access bearer response messages sent by the system, the specified service, or the specified interface.
Create Bearer Request	
Total TX	The total number of tunnel - create bearer request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - create bearer request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted create bearer request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted create bearer request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted create bearer request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted create bearer request messages received by this system, the specified service, or the specified interface.
Create Bearer Response	

Field	Description
Total TX	The total number of tunnel - create bearer response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - create bearer response messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of tunnel - initially transmitted create bearer response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted create bearer response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of tunnel - initially transmitted create bearer response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted create bearer response (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted create bearer response messages sent by the system, the specified service, or the specified interface.
Update Bearer Request	
Total TX	The total number of tunnel - update bearer request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - update bearer request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted update bearer request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted update bearer request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted update bearer request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted update bearer request messages received by this system, the specified service, or the specified interface.
Update Bearer Response	
Total TX	The total number of tunnel - update bearer response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - update bearer response messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of tunnel - initially transmitted update bearer response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted update bearer response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of tunnel - initially transmitted update bearer response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - initially transmitted update bearer response (accept or denied) messages received by the system, the specified service, or the specified interface.
Delete Bearer Request	

Field	Description
Total TX	The total number of tunnel - delete bearer request messages sent by the system, the specified service, or the specified interface.
Total RX	The total number of tunnel - delete bearer request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted delete bearer request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted delete bearer request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted delete bearer request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted delete bearer request messages received by this system, the specified service, or the specified interface.
Delete Bearer Response	
Total TX Accepted Denied	The total number of tunnel - delete bearer response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - delete bearer response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Total RX Accepted Denied	The total number of tunnel - initially transmitted update bearer response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of tunnel - delete bearer response (accept or denied) messages received by the system, the specified service, or the specified interface.
Modify Bearer Command	
Total TX	The total number of tunnel - modify bearer command messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - modify bearer command messages received by this system, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted modify bearer command messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted modify bearer command messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted modify bearer command messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted modify bearer command messages received by this system, the specified service, or the specified interface.
Modify Bearer Failure Indication	
Total TX	The total number of tunnel - modify bearer failure indication messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - modify bearer failure indication messages received by this system, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted modify bearer failure indication messages sent by the system, the specified service, or the specified interface.

Field	Description
Initial RX	The total number of tunnel - initially transmitted modify bearer failure indication messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted modify bearer failure indication messages sent by the system, the specified service, or the specified interface.
Bearer Resource Command	
Total TX	The total number of tunnel - bearer resource command messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - bearer resource command messages received by this system, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted bearer resource command messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted bearer resource command messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted bearer resource command messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted bearer resource command messages received by this system, the specified service, or the specified interface.
Bearer Resource Failure Indication	
Total TX	The total number of tunnel - bearer resource failure indication messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - bearer resource failure indication messages received by this system, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted bearer resource failure indication messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted bearer resource failure indication messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted bearer resource failure indication messages sent by the system, the specified service, or the specified interface.
Delete Bearer Command	
Total TX	The total number of tunnel - delete bearer command messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - delete bearer command messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted delete bearer command messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted delete bearer command messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted delete bearer command messages sent by the system, the specified service, or the specified interface.

Field	Description
Retrans RX	The total number of tunnel - retransmitted delete bearer command messages received by this system, the specified service, or the specified interface.
Delete Bearer Failure Indication	
Total TX	The total number of tunnel - delete bearer failure indication messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - delete bearer failure indication messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted delete bearer failure indication messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted delete bearer failure indication messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted delete bearer failure indication messages sent by the system, the specified service, or the specified interface.
Create Ind Data Forwarding Tunnel Request	
Total TX	The total number of tunnel - create indirect data forwarding tunnel requests sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - create indirect data forwarding tunnel requests received by this system, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted create indirect data forwarding tunnel requests sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted create indirect data forwarding tunnel requests received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted create indirect data forwarding tunnel requests sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted create indirect data forwarding tunnel requests received by this system, the specified service, or the specified interface.
Create Ind Data Forwarding Tunnel Response	
Total TX	The total number of tunnel - create indirect data forwarding tunnel response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - create indirect data forwarding tunnel response messages received by this system, or the specified interface.
Initial TX Accepted Denied	The total number of tunnel - initially transmitted create indirect data forwarding tunnel response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of create indirect data forwarding tunnel response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of tunnel - initially transmitted create indirect data forwarding tunnel response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of create indirect data forwarding tunnel response (accept or denied) messages received by the system, the specified service, or the specified interface.

Field	Description
Retrans TX	The total number of tunnel - retransmitted create indirect data forwarding tunnel response messages sent by the system, the specified service, or the specified interface.
Delete Ind Data Forwarding Tunnel Request	
Total TX	The total number of tunnel - delete indirect data forwarding tunnel requests sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - delete indirect data forwarding tunnel requests received by this system, or the specified interface.
Initial TX	The total number of tunnel - initially transmitted delete indirect data forwarding tunnel requests sent by the system, the specified service, or the specified interface.
Initial RX	The total number of tunnel - initially transmitted delete indirect data forwarding tunnel requests received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted delete indirect data forwarding tunnel requests sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of tunnel - retransmitted delete indirect data forwarding tunnel requests received by this system, the specified service, or the specified interface.
Delete Ind Data Forwarding Tunnel Response	
Total TX	The total number of tunnel - delete indirect data forwarding tunnel response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of tunnel - delete indirect data forwarding tunnel response messages received by this system, or the specified interface.
Initial TX Accepted Denied	The total number of tunnel - initially transmitted delete indirect data forwarding tunnel response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of delete indirect data forwarding tunnel response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of tunnel - initially transmitted delete indirect data forwarding tunnel response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of delete indirect data forwarding tunnel response (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of tunnel - retransmitted delete indirect data forwarding tunnel response messages sent by the system, the specified service, or the specified interface.
Path Management Messages	
Echo Request	
Total TX	The total number of path - echo request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of path - echo request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of path - initially transmitted echo request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of path - initially transmitted echo request messages received by the system, the specified service, or the specified interface.

Field	Description
Retrans TX	The total number of path - retransmitted echo request messages sent by the system, the specified service, or the specified interface.
Echo Response	
Total TX	The total number of path - echo response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of path - echo response messages received by this system, the specified service, or the specified interface.
Version Not Supported	
Total TX	The total number of path - version not supported messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of path - version not supported messages received by this system, the specified service, or the specified interface.
Mobility Management Messages	
Context Request	
Total TX	The total number of mobility - context request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - context request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of mobility - initially transmitted context request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of mobility - initially transmitted context request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted context request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of mobility - retransmitted context request messages received by the system, the specified service, or the specified interface.
Context Response	
Total TX	The total number of mobility - context response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - context response messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of mobility - initially transmitted context response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted context response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of mobility - initially transmitted context response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted context response (accept or denied) messages received by the system, the specified service, or the specified interface.

Field	Description
Retrans TX	The total number of mobility - retransmitted context response messages sent by the system, the specified service, or the specified interface.
Context Acknowledge	
Total TX	The total number of mobility - context acknowledge messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - context acknowledge messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of mobility - initially transmitted context acknowledge messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted context acknowledge (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of mobility - initially transmitted context acknowledge messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted context acknowledge (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted context acknowledge messages sent by the system, the specified service, or the specified interface.
Identification Request	
Total TX	The total number of mobility - identification request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - identification request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of mobility - initially transmitted identification request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of mobility - initially transmitted identification request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted identification request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of mobility - retransmitted identification request messages received by the system, the specified service, or the specified interface.
Identification Response	
Total TX Accepted Denied	The total number of mobility - identification response messages sent by this system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - identification response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Total RX Accepted Denied	The total number of mobility - identification response messages received by this system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - identification response (accept or denied) messages received by the system, the specified service, or the specified interface.
Forward Relocation Request	

Field	Description
Total TX	The total number of mobility - forward relocation request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - forward relocation request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of mobility - initially transmitted forward relocation request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of mobility - initially transmitted forward relocation request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted forward relocation request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of mobility - retransmitted forward relocation request messages received by the system, the specified service, or the specified interface.
Forward Relocation Response	
Total TX	The total number of mobility - forward relocation response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - forward relocation response messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of mobility - initially transmitted forward relocation response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted forward relocation response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of mobility - initially transmitted forward relocation response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted forward relocation response (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted forward relocation response messages sent by the system, the specified service, or the specified interface.
Forward Access Context Notification	
Total TX	The total number of mobility - forward access context notification messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - forward access context notification messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of mobility - initially transmitted forward access context notification messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of mobility - initially transmitted forward access context notification messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted forward access context notification messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of mobility - retransmitted forward access context notification messages received by the system, the specified service, or the specified interface.

Field	Description
Forward Access Context Acknowledge	
Total TX	The total number of mobility - forward access context acknowledge messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - forward access context acknowledge messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of mobility - initially transmitted forward access context acknowledge messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted forward access context acknowledge (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of mobility - initially transmitted forward access context acknowledge messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted forward access context acknowledge (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted forward access context acknowledge messages sent by the system, the specified service, or the specified interface.
Forward Relocation Complete Notification	
Total TX	The total number of mobility - forward relocation complete notification messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - forward relocation complete notification messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of mobility - initially transmitted forward relocation complete notification messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of mobility - initially transmitted forward relocation complete notification messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted forward relocation complete notification messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of mobility - retransmitted forward relocation complete notification messages received by the system, the specified service, or the specified interface.
Forward Relocation Complete Acknowledge	
Total TX	The total number of mobility - forward relocation complete acknowledge messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - forward relocation complete acknowledge messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of mobility - initially transmitted forward relocation complete acknowledge messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted forward relocation complete acknowledge (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of mobility - initially transmitted forward relocation complete acknowledge messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted forward relocation complete acknowledge (accept or denied) messages received by the system, the specified service, or the specified interface.

Field	Description
Retrans TX	The total number of mobility - retransmitted forward relocation complete acknowledge messages sent by the system, the specified service, or the specified interface.
Relocation Cancel Request	
Total TX	The total number of mobility - relocation cancel request messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - relocation cancel request messages received by this system, the specified service, or the specified interface.
Initial TX	The total number of mobility - initially transmitted relocation cancel request messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of mobility - initially transmitted relocation cancel request messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted relocation cancel request messages sent by the system, the specified service, or the specified interface.
Retrans RX	The total number of mobility - retransmitted relocation cancel request messages received by the system, the specified service, or the specified interface.
Relocation Cancel Response	
Total TX	The total number of mobility - relocation cancel response messages sent by this system, the specified service, or the specified interface.
Total RX	The total number of mobility - relocation cancel response messages received by this system, the specified service, or the specified interface.
Initial TX Accepted Denied	The total number of mobility - initially transmitted relocation cancel response messages sent by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted relocation cancel response (accept or denied) messages sent by the system, the specified service, or the specified interface.
Initial RX Accepted Denied	The total number of mobility - initially transmitted relocation cancel response messages received by the system, the specified service, or the specified interface. Accepted and Denied display the total number of mobility - initially transmitted relocation cancel response (accept or denied) messages received by the system, the specified service, or the specified interface.
Retrans TX	The total number of mobility - retransmitted relocation cancel response messages sent by the system, the specified service, or the specified interface.
RAN Information Relay	
Initial TX	The total number of initially transmitted RAN Information Management (RIM) messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of initially transmitted RAN Information Management (RIM) messages received by the system, the specified service, or the specified interface.
Configuration Transfer Tunnel	
Initial TX	The total number of initially transmitted configuration transfer tunnel messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of initially transmitted configuration transfer tunnel messages received by the system, the specified service, or the specified interface.

Field	Description
Trace Management Messages	
Trace Session Activation	
Initial TX	The total number of trace - initially transmitted session activation messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of trace - initially transmitted session activation messages received by the system, the specified service, or the specified interface.
Trace Session Deactivation	
Initial TX	The total number of trace - initially transmitted session deactivation messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of trace - initially transmitted session deactivation messages received by the system, the specified service, or the specified interface.
CS Fallback Messages (CSFB)	
Suspend Notification	
Initial TX	The total number of CSFB (Circuit Switched Fallback) - initially transmitted suspend notification messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of CSFB - initially transmitted suspend notification messages received by the system, the specified service, or the specified interface.
Suspend Acknowledge	
Initial TX	The total number of CSFB - initially transmitted suspend acknowledge messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of CSFB - initially transmitted suspend acknowledge messages received by the system, the specified service, or the specified interface.
Resume Notification	
Initial TX	The total number of CSFB - initially transmitted resume notification messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of CSFB - initially transmitted resume notification messages received by the system, the specified service, or the specified interface.
Resume Acknowledge	
Initial TX	The total number of CSFB - initially transmitted resume acknowledge messages sent by the system, the specified service, or the specified interface.
Initial RX	The total number of CSFB - initially transmitted resume acknowledge messages received by the system, the specified service, or the specified interface.
Total Signalling Packets	
TX	The total number of signalling packets sent by the system, the specified service, or the specified interface.
RX	The total number of signalling packets received by the system, the specified service, or the specified interface.
Total Signalling Bytes	
TX	The total number of signalling bytes sent by the system, the specified service, or the specified interface.

Field	Description
RX	The total number of signalling bytes received by the system, the specified service, or the specified interface.

show egtpc statistics verbose

3GPP Release 9, 29.274

The `show egtpc statistics verbose` command includes all of the data provided in the `show egtpc statistics` command and appends detailed rejection statistics for the following call request/response/notification denials [3GPP Release 9, 29.274]:

- Reject Statistics
- Modify Bearer Request Denied
- Delete Bearer Request Denied
- Delete Session Request Denied
- Downlink Data Notification Denied
- Release Access Bearers Denied
- Create Bearer Denied
- Update Bearer Denied
- Delete Bearer Command Denied
- Modify Bearer Command Denied
- Bearer Resource Command Denied
- Create Indirect Data Forwarding Tunnel Request Denied
- Delete Indirect Data Forwarding Tunnel Request Denied
- Change Notification Request Denied
- Context Request Denied
- Context Response Denied
- Identification Request Denied
- Forward Relocation Request Denied
- Forward Access Context Notification Denied
- Forward Relocation Complete Notification Denied
- Relocation Cancel Request Denied
- Suspend Notification Denied
- Resume Notification Denied

The table below lists and describes the transmit and receive parameters output for all of the call denials listed above.

Table 232. show egtpc statistics verbose Command Output Descriptions -- 3GPP Release 9, 29.274

Field	Description
Context not existent TX	The total number of Context Does Not Exist messages sent by this system, the specified service, or the specified interface.
Context not existent RX	The total number of Context Does Not Exist messages received by this system, the specified service, or the specified interface.
Invalid message format TX	The total number of Invalid Message Format messages sent by the system, the specified service, or the specified interface.
Invalid message format RX	The total number of Invalid Message Format messages received by the system, the specified service, or the specified interface.
Version not supported TX	The total number of Version Not Supported messages sent by the system, the specified service, or the specified interface.
Version not supported RX	The total number of Version Not Supported messages received by this system, the specified service, or the specified interface.
Invalid length TX	The total number of Invalid Length messages sent by the system, the specified service, or the specified interface.
Invalid length RX	The total number of Invalid Length messages received by this system, the specified service, or the specified interface.
Mandatory IE incorrect TX	The total number of Mandatory IE (Information Element) Incorrect messages sent by the system, the specified service, or the specified interface.
Mandatory IE incorrect RX	The total number of Mandatory IE Incorrect messages received by this system, the specified service, or the specified interface.
Mandatory IE missing TX	The total number of Mandatory IE Missing messages sent by the system, the specified service, or the specified interface.
Mandatory IE missing RX	The total number of Mandatory IE Missing messages received by this system, the specified service, or the specified interface.
System failure TX	The total number of System Failure messages sent by the system, the specified service, or the specified interface.
System failure RX	The total number of System Failure messages received by this system, the specified service, or the specified interface.
No resources available TX	The total number of No Resources Available messages sent by the system, the specified service, or the specified interface.
No resources available RX	The total number of No Resources Available messages received by the system, the specified service, or the specified interface.
Semantic error in TFT TX	The total number of Semantic Error in TFT (Traffic Flow Template) messages sent by the system, the specified service, or the specified interface.
Semantic error in TFT RX	The total number of Semantic Error in TFT messages received by this system, the specified service, or the specified interface.
Syntactic error in TFT TX	The total number of Syntactic Error in TFT messages sent by the system, the specified service, or the specified interface.

Field	Description
Syntactic error in TFT RX	The total number of Syntactic Error in TFT messages received by this system, the specified service, or the specified interface.
Semantic error in Pkt Fltr TX	The total number of Semantic Error in Packet Filtering messages sent by the system, the specified service, or the specified interface.
Semantic error in Pkt Fltr RX	The total number of Semantic Error in Packet Filtering messages received by this system, the specified service, or the specified interface.
Syntactic error in Pkt Fltr TX	The total number of Syntactic Error in Packet Filtering messages sent by the system, the specified service, or the specified interface.
Syntactic error in Pkt Fltr RX	The total number of Syntactic Error in Packet Filtering messages received by this system, the specified service, or the specified interface.
Missing or unknown APN TX	The total number of Missing or Unknown APN (Access Point number) messages sent by the system, the specified service, or the specified interface.
Missing or unknown APN RX	The total number of Missing or Unknown APN messages received by this system, the specified service, or the specified interface.
GRE key not found TX	The total number of GRE (Generic Routing Encapsulation) Key Not Found messages sent by the system, the specified service, or the specified interface.
GRE key not found RX	The total number of GRE Key Not Found messages received by this system, the specified service, or the specified interface.
Reallocation failure TX	The total number of Reallocation Failure messages sent by the system, the specified service, or the specified interface.
Reallocation failure RX	The total number of Reallocation Failure messages received by this system, the specified service, or the specified interface.
Denied in RAT TX	The total number of Denied in RAT (Radio Access Technology) messages sent by the system, the specified service, or the specified interface.
Denied in RAT RX	The total number of Denied in RAT messages received by this system, the specified service, or the specified interface.
Pref. PDN type unsupported TX	The total number of Preferred PDN Type Unsupported messages sent by the system, the specified service, or the specified interface.
Pref. PDN type unsupported RX	The total number of Preferred PDN Type Unsupported messages received by this system, the specified service, or the specified interface.
All dynamic addr occupied TX	The total number of All Dynamic Addresses Occupied messages sent by the system, the specified service, or the specified interface.
All dynamic addr occupied RX	The total number of All Dynamic Addresses Occupied messages received by this system, the specified service, or the specified interface.
UE ctx w/o TFT activated TX	The total number of UE Context without TFT (Traffic Flow Template) Already Activated messages sent by the system, the specified service, or the specified interface.
UE ctx w/o TFT activated RX	The total number of UE Context without TFT Already Activated messages received by this system, the specified service, or the specified interface.
Prot type not supported TX	The total number of Protocol Type Not Supported messages sent by the system, the specified service, or the specified interface.

Field	Description
Prot type not supported RX	The total number of Protocol Type Not Supported messages received by this system, the specified service, or the specified interface.
UE not responding TX	The total number of UE (User Equipment) Not Responding messages sent by the system, the specified service, or the specified interface.
UE not responding RX	The total number of UE Not Responding messages received by this system, the specified service, or the specified interface.
UE refuses TX	The total number of UE Refuses messages sent by the system, the specified service, or the specified interface.
UE refuses RX	The total number of UE Refuses messages received by this system, the specified service, or the specified interface.
Service denied TX	The total number of Service Denied messages sent by the system, the specified service, or the specified interface.
Service denied RX	The total number of Service Denied messages received by this system, the specified service, or the specified interface.
Unable to page UE TX	The total number of Unable to Page UE (User Equipment) messages sent by the system, the specified service, or the specified interface.
Unable to page UE RX	The total number of Unable to Page UE messages received by this system, the specified service, or the specified interface.
No Memory TX	The total number of No Memory messages sent by the system, the specified service, or the specified interface.
No Memory RX	The total number of No Memory messages received by this system, the specified service, or the specified interface.
User Auth Failed TX	The total number of User Authentication Failed messages sent by the system, the specified service, or the specified interface.
User Auth Failed RX	The total number of User Authentication Failed messages received by this system, the specified service, or the specified interface.
Apn Access Denied TX	The total number of APN (Access Point Number) Access Denied messages sent by the system, the specified service, or the specified interface.
Apn Access Denied RX	The total number of APN Access Denied messages received by this system, the specified service, or the specified interface.
Request Rejected TX	The total number of Request Rejected messages sent by the system, the specified service, or the specified interface.
Request Rejected RX	The total number of Request Rejected messages received by this system, the specified service, or the specified interface.
Semantic error in TAD TX	The total number of Semantic Error in TAD (Traffic Aggregate Description) messages sent by the system, the specified service, or the specified interface.
Semantic error in TAD RX	The total number of Semantic Error in TAD messages received by this system, the specified service, or the specified interface.
Syntactic error in TAD TX	The total number of Syntactic Error in TAD messages sent by the system, the specified service, or the specified interface.

Field	Description
Syntactic error in TAD RX	The total number of Syntactic Error in TAD messages received by this system, the specified service, or the specified interface.
Collision with Nw init Req TX	The total number of Collision with Network Initiated Request messages sent by the system, the specified service, or the specified interface.
Collision with Nw init Req RX	The total number of Collision with Network Initiated Request messages received by this system, the specified service, or the specified interface.
UE page unable due to Susp TX	The total number of Unable to Page UE (User Equipment) Due to Suspension messages sent by the system, the specified service, or the specified interface.
UE page unable due to Susp RX	The total number of Unable to Page UE Due to Suspension messages received by this system, the specified service, or the specified interface.
Conditional IE missing TX	The total number of Conditional IE (Information Element) Missing messages sent by the system, the specified service, or the specified interface.
Conditional IE missing RX	The total number of Conditional IE Missing messages received by this system, the specified service, or the specified interface.
Apn Restr Type Incompatible TX	The total number of APN (Access Point Number) Restriction Type Incompatible with Currently Active PDN Connection messages sent by the system, the specified service, or the specified interface.
Apn Restr Type Incompatible RX	The total number of APN Restriction Type Incompatible with Currently Active PDN Connection messages received by this system, the specified service, or the specified interface.
Invalid len Piggybacked msg TX	The total number of Invalid Overall Length of the Triggered Response Message and a Piggybacked Initial Message messages sent by the system, the specified service, or the specified interface.
Invalid len Piggybacked msg RX	The total number of Invalid Overall Length of the Triggered Response Message and a Piggybacked Initial Message messages received by this system, the specified service, or the specified interface.
Invalid remote Peer reply TX	The total number of Invalid Reply from Remote Peer messages sent by the system, the specified service, or the specified interface.
Invalid remote Peer reply RX	The total number of Invalid Reply from Remote Peer messages received by this system, the specified service, or the specified interface.
PTMSI signature mismatch TX	The total number of PTMSI (Packet Temporary Mobile Subscriber Identity) Signature Mismatch messages sent by the system, the specified service, or the specified interface.
PTMSI signature mismatch RX	The total number of PTMSI Signature Mismatch messages received by this system, the specified service, or the specified interface.
IMSI not Known TX	The total number of IMSI (International Mobile Subscriber Identity) Not Known messages sent by the system, the specified service, or the specified interface.
IMSI not Known RX	The total number of IMSI Not Known messages received by this system, the specified service, or the specified interface.
Peer not responding TX	The total number of Remote Peer Not Responding messages sent by the system, the specified service, or the specified interface.
Peer not responding RX	The total number of Remote Peer Not Responding messages received by this system, the specified service, or the specified interface.
Data Fwding not supported TX	The total number of Data Forwarding Not Supported messages sent by the system, the specified service, or the specified interface.

Field	Description
Data Fwding not supported RX	The total number of Data Forwarding Not Supported messages received by this system, the specified service, or the specified interface.
Fallback to GTPV1 TX	The total number of Fallback to GTPV1 messages sent by the system, the specified service, or the specified interface.
Fallback to GTPV1 RX	The total number of Fallback to GTPV1 messages received by this system, the specified service, or the specified interface.
Invalid Peer TX	The total number of Invalid Reply from Remote Peer messages sent by the system, the specified service, or the specified interface.
Invalid Peer RX	The total number of Invalid Reply from Remote Peer messages received by this system, the specified service, or the specified interface.
Temp Rej due to HO in prog TX	The total number of Temporarily Rejected Due to Handover Procedure in Progress messages sent by the system, the specified service, or the specified interface.
Temp Rej due to HO in prog RX	The total number of Temporarily Rejected Due to Handover Procedure in Progress messages received by this system, the specified service, or the specified interface.
Unknown TX	The total number of Unknown (unspecified rejection cause) messages sent by the system, the specified service, or the specified interface.
Unknown RX	The total number of Unknown (unspecified rejection cause) messages received by this system, the specified service, or the specified interface.

SRVCC Messages

The **show egtpc statistics verbose** command includes all of the data provided in the **show egtpc statistics** command, and appends the detailed rejection statistics as described in the table above as well the following statistics for SRVCC (Single Radio Voice Call Continuity) requests and notifications:

- PS to CS Request Denied [RX only]
- PS to CS Complete Notification Denied [TX only]
- PS to CS Cancel Notification Denied [RX only]

Table 233. show egtpc statistics verbose Command Output Descriptions -- SRVCC Messages

Field	Description
PS to CS Request Denied [RX only]	
Context not existent RX	The total number of Context Does Not Exist messages received by this system, the specified service, or the specified interface.
Invalid message format RX	The total number of Invalid Message Format messages received by this system, the specified service, or the specified interface.
Version not supported RX	The total number of Version Not Supported messages received by this system, the specified service, or the specified interface.

Field	Description
Invalid length RX	The total number of Invalid Length messages received by this system, the specified service, or the specified interface.
Service not supported	The total number of Service not Supported messages received by this system, the specified service, or the specified interface.
Mandatory IE incorrect RX	The total number of Mandatory IE Incorrect messages received by this system, the specified service, or the specified interface.
Mandatory IE missing RX	The total number of Mandatory IE Missing messages received by this system, the specified service, or the specified interface.
System failure RX	The total number of System Failure messages received by this system, the specified service, or the specified interface.
No resources available RX	The total number of No Resources Available messages received by the system, the specified service, or the specified interface.
Semantic error in TFT RX	The total number of Semantic Error in TFT (Traffic Flow Template) messages received by this system, the specified service, or the specified interface.
Syntactic error in TFT RX	The total number of Syntactic Error in TFT messages received by this system, the specified service, or the specified interface.
Semantic error in Pkt Fltr RX	The total number of Semantic Error in Packet Filtering messages received by this system, the specified service, or the specified interface.
Syntactic error in Pkt Fltr RX	The total number of Syntactic Error in Packet Filtering messages received by this system, the specified service, or the specified interface.
Missing or unknown APN RX	The total number of Missing or Unknown APN (Access Point number) messages received by this system, the specified service, or the specified interface.
GRE key not found RX	The total number of GRE (Generic Routing Encapsulation) Key Not Found messages received by this system, the specified service, or the specified interface.
Reallocation failure RX	The total number of Reallocation Failure messages received by this system, the specified service, or the specified interface.
Denied in RAT RX	The total number of Denied in RAT (Radio Access Technology) messages received by this system, the specified service, or the specified interface.
Pref. PDN type unsupported RX	The total number of Preferred PDN Type Unsupported messages received by this system, the specified service, or the specified interface.
All dynamic addr occupied RX	The total number of All Dynamic Addresses Occupied messages received by this system, the specified service, or the specified interface.
UE ctx w/o TFT activated RX	The total number of UE (User Equipment) Context without TFT Already Activated messages received by this system, the specified service, or the specified interface.
Prot type not supported RX	The total number of Protocol Type Not Supported messages received by this system, the specified service, or the specified interface.
UE not responding RX	The total number of UE (User Equipment) Not Responding messages received by this system, the specified service, or the specified interface.
UE refuses RX	The total number of UE Refuses messages received by this system, the specified service, or the specified interface.

Field	Description
Service denied RX	The total number of Service Denied messages received by this system, the specified service, or the specified interface.
Unable to page UE RX	The total number of Unable to Page UE messages received by this system, the specified service, or the specified interface.
No Memory RX	The total number of No Memory messages received by this system, the specified service, or the specified interface.
User Auth Failed RX	The total number of User Authentication Failed messages received by this system, the specified service, or the specified interface.
Apn Access Denied RX	The total number of APN (Access Point Number) Access Denied messages received by this system, the specified service, or the specified interface.
Request Rejected RX	The total number of Request Rejected messages received by this system, the specified service, or the specified interface.
Semantic error in TAD RX	The total number of Semantic Error in TAD (Traffic Aggregate Description) messages received by this system, the specified service, or the specified interface.
Syntactic error in TAD RX	The total number of Syntactic Error in TAD messages received by this system, the specified service, or the specified interface.
Collision with Nw init Req RX	The total number of Collision with Network Initiated Request messages received by this system, the specified service, or the specified interface.
UE page unable due to Susp RX	The total number of Unable to Page UE Due to Suspension messages received by this system, the specified service, or the specified interface.
Conditional IE missing RX	The total number of Conditional IE Missing messages received by this system, the specified service, or the specified interface.
Apn Restr Type Incompatible RX	The total number of APN (Access Point Name) Restriction Type Incompatible with Currently Active PDN Connection messages sent by the system, the specified service, or the specified interface.
Invalid len Piggybacked msg RX	The total number of Invalid Overall Length of the Triggered Response Message and a Piggybacked Initial Message messages received by this system, the specified service, or the specified interface.
Invalid remote Peer reply RX	The total number of Invalid Reply from Remote Peer messages received by this system, the specified service, or the specified interface.
PTMSI signature mismatch RX	The total number of PTMSI (Packet Temporary Mobile Subscriber Identity) Signature Mismatch messages received by this system, the specified service, or the specified interface.
IMSI not Known RX	The total number of IMSI (International Mobile Subscriber Identity) Not Known messages received by this system, the specified service, or the specified interface.
Peer not responding RX	The total number of Remote Peer Not Responding messages received by this system, the specified service, or the specified interface.
Data Fwding not supported RX	The total number of Data Forwarding Not Supported messages received by this system, the specified service, or the specified interface.
Fallback to GTPV1 RX	The total number of Fallback to GTPv1 messages received by this system, the specified service, or the specified interface.
Invalid Peer RX	The total number of Invalid Reply from Remote Peer messages received by this system, the specified service, or the specified interface.

Field	Description
Temp Rej due to HO in prog RX	The total number of Temporarily Rejected Due to Handover Procedure in Progress messages received by this system, the specified service, or the specified interface.
Unknown RX	The total number of Unknown (unspecified rejection cause) messages received by this system, the specified service, or the specified interface.
PS to CS Complete Notification Denied [TX only]	
Context not existent TX	The total number of Context Does Not Exist messages sent by this system, the specified service, or the specified interface.
Invalid message format TX	The total number of Invalid Message Format messages sent by the system, the specified service, or the specified interface.
Version not supported TX	The total number of Version Not Supported messages sent by the system, the specified service, or the specified interface.
Invalid length TX	The total number of Invalid Length messages sent by the system, the specified service, or the specified interface.
Mandatory IE incorrect TX	The total number of Mandatory IE (Information Element) Incorrect messages sent by the system, the specified service, or the specified interface.
Mandatory IE missing TX	The total number of Mandatory IE Missing messages sent by the system, the specified service, or the specified interface.
System failure TX	The total number of System Failure messages sent by the system, the specified service, or the specified interface.
No resources available TX	The total number of No Resources Available messages sent by the system, the specified service, or the specified interface.
Semantic error in TFT TX	The total number of Semantic Error in TFT (Traffic Flow Template) messages sent by the system, the specified service, or the specified interface.
Syntactic error in TFT TX	The total number of Syntactic Error in TFT messages sent by the system, the specified service, or the specified interface.
Semantic error in Pkt Fltr TX	The total number of Semantic Error in Packet Filtering messages sent by the system, the specified service, or the specified interface.
Syntactic error in Pkt Fltr TX	The total number of Syntactic Error in Packet Filtering messages sent by the system, the specified service, or the specified interface.
Missing or unknown APN TX	The total number of Missing or Unknown APN (Access Point number) messages sent by the system, the specified service, or the specified interface.
GRE key not found TX	The total number of GRE (Generic Routing Encapsulation) Key Not Found messages sent by the system, the specified service, or the specified interface.
Reallocation failure TX	The total number of Reallocation Failure messages sent by the system, the specified service, or the specified interface.
Denied in RAT TX	The total number of Denied in RAT (Radio Access Technology) messages sent by the system, the specified service, or the specified interface.
Pref. PDN type unsupported TX	The total number of Preferred PDN Type Unsupported messages sent by the system, the specified service, or the specified interface.

Field	Description
All dynamic addr occupied TX	The total number of All Dynamic Addresses Occupied messages sent by the system, the specified service, or the specified interface.
UE ctx w/o TFT activated TX	The total number of UE Context without TFT (Traffic Flow Template) Already Activated messages sent by the system, the specified service, or the specified interface.
Prot type not supported TX	The total number of Protocol Type Not Supported messages sent by the system, the specified service, or the specified interface.
UE not responding TX	The total number of UE (User Equipment) Not Responding messages sent by the system, the specified service, or the specified interface.
UE refuses TX	The total number of UE Refuses messages sent by the system, the specified service, or the specified interface.
Service denied TX	The total number of Service Denied messages sent by the system, the specified service, or the specified interface.
Unable to page UE TX	The total number of Unable to Page UE (User Equipment) messages sent by the system, the specified service, or the specified interface.
No Memory TX	The total number of No Memory messages sent by the system, the specified service, or the specified interface.
User Auth Failed TX	The total number of User Authentication Failed messages sent by the system, the specified service, or the specified interface.
Apn Access Denied TX	The total number of APN (Access Point Number) Access Denied messages sent by the system, the specified service, or the specified interface.
Request Rejected TX	The total number of Request Rejected messages sent by the system, the specified service, or the specified interface.
Semantic error in TAD TX	The total number of Semantic Error in TAD (Traffic Aggregate Description) messages sent by the system, the specified service, or the specified interface.
Syntactic error in TAD TX	The total number of Syntactic Error in TAD messages sent by the system, the specified service, or the specified interface.
Collision with Nw init Req TX	The total number of Collision with Network Initiated Request messages sent by the system, the specified service, or the specified interface.
UE page unable due to Susp TX	The total number of Unable to Page UE (User Equipment) Due to Suspension messages sent by the system, the specified service, or the specified interface.
Conditional IE missing TX	The total number of Conditional IE (Information Element) Missing messages sent by the system, the specified service, or the specified interface.
Apn Restr Type Incompatible TX	The total number of APN (Access Point Number) Restriction Type Incompatible with Currently Active PDN Connection messages sent by the system, the specified service, or the specified interface.
Invalid len Piggybacked msg TX	The total number of Invalid Overall Length of the Triggered Response Message and a Piggybacked Initial Message messages sent by the system, the specified service, or the specified interface.
Invalid remote Peer reply TX	The total number of Invalid Reply from Remote Peer messages sent by the system, the specified service, or the specified interface.
PTMSI signature mismatch TX	The total number of PTMSI (Packet Temporary Mobile Subscriber Identity) Signature Mismatch messages sent by the system, the specified service, or the specified interface.

Field	Description
IMSI not Known TX	The total number of IMSI (International Mobile Subscriber Identity) Not Known messages sent by the system, the specified service, or the specified interface.
Peer not responding TX	The total number of Remote Peer Not Responding messages sent by the system, the specified service, or the specified interface.
Data Fwding not supported TX	The total number of Data Forwarding Not Supported messages sent by the system, the specified service, or the specified interface.
Fallback to GTPv1 TX	The total number of Fallback to GTPv1 messages sent by the system, the specified service, or the specified interface.
Invalid Peer TX	The total number of Invalid Reply from Remote Peer messages sent by the system, the specified service, or the specified interface.
Temp Rej due to HO in prog TX	The total number of Temporarily Rejected Due to Handover Procedure in Progress messages sent by the system, the specified service, or the specified interface.
Unknown TX	The total number of Unknown (unspecified rejection cause) messages sent by the system, the specified service, or the specified interface.
PS to CS Cancel Notification Denied [RX only]	
Context not existent RX	The total number of Context Does Not Exist messages received by this system, the specified service, or the specified interface.
Invalid message format RX	The total number of Invalid Message Format messages received by the system, the specified service, or the specified interface.
Version not supported RX	The total number of Version Not Supported messages received by this system, the specified service, or the specified interface.
Invalid length RX	The total number of Invalid Length messages received by this system, the specified service, or the specified interface.
Mandatory IE incorrect RX	The total number of Mandatory IE (Information Element) Incorrect messages received by this system, the specified service, or the specified interface.
Mandatory IE missing RX	The total number of Mandatory IE Missing messages received by this system, the specified service, or the specified interface.
System failure RX	The total number of System Failure messages received by this system, the specified service, or the specified interface.
No resources available RX	The total number of No Resources Available messages received by the system, the specified service, or the specified interface.
Semantic error in TFT RX	The total number of Semantic Error in TFT (Traffic Flow Template) messages received by this system, the specified service, or the specified interface.
Syntactic error in TFT RX	The total number of Syntactic Error in TFT messages received by this system, the specified service, or the specified interface.
Semantic error in Pkt Fltr RX	The total number of Semantic Error in Packet Filtering messages received by this system, the specified service, or the specified interface.
Syntactic error in Pkt Fltr RX	The total number of Syntactic Error in Packet Filtering messages received by this system, the specified service, or the specified interface.

Field	Description
Missing or unknown APN RX	The total number of Missing or Unknown APN (Access Point Number) messages received by this system, the specified service, or the specified interface.
GRE key not found RX	The total number of GRE Key Not Found messages received by this system, the specified service, or the specified interface.
Reallocation failure RX	The total number of Reallocation Failure messages received by this system, the specified service, or the specified interface.
Denied in RAT RX	The total number of Denied in RAT (Radio Access Technology) messages received by this system, the specified service, or the specified interface.
Pref. PDN type unsupported RX	The total number of Preferred PDN Type Unsupported messages received by this system, the specified service, or the specified interface.
All dynamic addr occupied RX	The total number of All Dynamic Addresses Occupied messages received by this system, the specified service, or the specified interface.
UE ctx w/o TFT activated RX	The total number of UE (User Equipment) Context without TFT Already Activated messages received by this system, the specified service, or the specified interface.
Prot type not supported RX	The total number of Protocol Type Not Supported messages received by this system, the specified service, or the specified interface.
UE not responding RX	The total number of UE Not Responding messages received by this system, the specified service, or the specified interface.
UE refuses RX	The total number of UE Refuses messages received by this system, the specified service, or the specified interface.
Service denied RX	The total number of Service Denied messages received by this system, the specified service, or the specified interface.
Unable to page UE RX	The total number of Unable to Page UE (User Equipment) messages received by this system, the specified service, or the specified interface.
No Memory RX	The total number of No Memory messages received by this system, the specified service, or the specified interface.
User Auth Failed RX	The total number of User Authentication Failed messages received by this system, the specified service, or the specified interface.
Apn Access Denied RX	The total number of APN (Access Point Name) Access Denied messages received by this system, the specified service, or the specified interface.
Request Rejected RX	The total number of Request Rejected messages received by this system, the specified service, or the specified interface.
Semantic error in TAD RX	The total number of Semantic Error in TAD (Traffic Aggregate Description) messages received by this system, the specified service, or the specified interface.
Syntactic error in TAD RX	The total number of Syntactic Error in TAD messages received by this system, the specified service, or the specified interface.
Collision with Nw init Req RX	The total number of Collision with Network Initiated Request messages received by this system, the specified service, or the specified interface.
UE page unable due to Susp RX	The total number of Unable to Page UE Due to Suspension messages received by this system, the specified service, or the specified interface.

Field	Description
Conditional IE missing RX	The total number of Conditional IE Missing messages received by this system, the specified service, or the specified interface.
Apn Restr Type Incompatible RX	The total number of APN Restriction Type Incompatible with Currently Active PDN Connection messages sent by the system, the specified service, or the specified interface.
Invalid len Piggybacked msg RX	The total number of Invalid Overall Length of the Triggered Response Message and a Piggybacked Initial Message messages received by this system, the specified service, or the specified interface.
Invalid remote Peer reply RX	The total number of Invalid Reply from Remote Peer messages received by this system, the specified service, or the specified interface.
PTMSI signature mismatch RX	The total number of PTMSI (Packet Temporary Mobile Subscriber Identity) Signature Mismatch messages received by this system, the specified service, or the specified interface.
IMSI not Known RX	The total number of IMSI (International Mobile Subscriber Identity) Not Known messages received by this system, the specified service, or the specified interface.
Peer not responding RX	The total number of Remote Peer Not Responding messages received by this system, the specified service, or the specified interface.
Data Fwding not supported RX	The total number of Data Forwarding Not Supported messages received by this system, the specified service, or the specified interface.
Fallback to GTPV1 RX	The total number of Fallback to GTPv1 messages received by this system, the specified service, or the specified interface.
Invalid Peer RX	The total number of Invalid Reply from Remote Peer messages received by this system, the specified service, or the specified interface.
Temp Rej due to HO in prog RX	The total number of Temporarily Rejected Due to Handover Procedure in Progress messages received by this system, the specified service, or the specified interface.
Unknown RX	The total number of Unknown (unspecified rejection cause) messages received by this system, the specified service, or the specified interface.

show egtp-service all

Table 234. show egtp service all Command Output Descriptions

Field	Description
Service name	The name of the service configured in the named context.
Service-ID	A system generated ID number applied to the service.
Context	The name of the context where the service is configured.
Interface Type	The type of LTE interface this service is supporting.
Status	The status of the service, i.e., “STARTED”.
Restart Counter	
Message Validation Mode	The type of IE validation to be performed on messages received by this service.
GTPC Retransmission Timeout	The number of seconds between the re-sending of GTP-C echo messages.
GTPC Maximum Request Retransmissions	The number of control packet request message retransmissions that can be sent before an error condition is established.
GTPC IP QoS DSCP value	The IP QoS DSCP per-hop behavior to be marked on the outer header of signalling packets originating from the LTE component.
GTPC Echo	Identifies if GTP-C echo messages will be sent.
GTPC Echo Interval	The duration between the sending of GTP-C echo messages.
GTP-C Bind IPv4 Address	The IPv4 address of the interface to which this service is bound.
GTP-C Bind IPv6 Address	The IPv6 address of the interface to which this service is bound.

Chapter 94

show event-notif

This chapter includes the `show enent-notif` command output tables.

Chapter 95

show fans

 **Important:** On some platforms, the output will change to show the state of the fan controller and the speed of each fan.

Table 235. **show fans** Command Output Descriptions

Field	Description
Upper Fan Controller	The Upper Fan Tray pulls air through the chassis and exhausts it from the upper rear of the chassis.
Lower Fan Controller	The Lower Fan Tray pulls ambient air into the chassis and pushes it upward and through the chassis.
State	Displays the operational state of the fan tray and fan tray controller. The possible states are:
	Normal: There are no errors. This is the normal operating condition.
	Multiple Fan Failure: Multiple fans on the fan tray have failed.
	Single Fan Failure: A single fan on the fan tray has failed.
	Heartbeat Error: The redundant fan controller on the fan tray did not respond to the heartbeat signal.
	Fan A Communication Error: An error has occurred on the primary fan controller bus for the fan tray.
	Fan B Communication Error: An error has occurred on the redundant fan controller bus for the fan tray.
	Communication Error: An inter-bus communication error was experienced between the primary and redundant fan controllers on the fan tray.
	NOTE: If any of the error conditions above are reported for your system, it is likely that the fan tray will need to be repaired or replaced. Please contact your local sales representative for additional information.
Speed	Indicates the rate at which the fans on the fan tray are spinning as a percentage of the maximum speed. Lower percentages indicate that the fans are having to do less work to keep the chassis cool and should be the normal operating condition. Higher percentages indicate that the fans are having to work harder to keep the chassis cool. This could be due to a number of reasons including improper ventilation of the chassis, individual fan failures, or even a dirty air filter. Please refer to the <i>System Administration Guide</i> for information on troubleshooting the problem. NOTE: Systems equipped with the dual-speed fan tray controller display the fan speed as follows: Normal: The fans on the fan tray are operating at a normal speed to maintain a safe operating temperature for the chassis and its components. High: The fans on the fan tray are operating in high speed to maintain a safe operating temperature for the chassis and its components.

Field	Description
Temp	Displays the temperature of the chassis in degrees Celsius at the fan tray. The ambient air temperature shown for the Lower Fan Controller should not exceed 40 degrees Celsius for an extended period of time. The exhaust air temperature shown for the Upper Fan Controller should not exceed 55 degrees Celsius. For additional information on air temperature, refer to the description of the show temperature command in this guide.

Chapter 96

show fa-service

Table 236. show fa-service name Command Output Descriptions

Field	Description
Service name	The name of the FA service for which the information are displayed.
Context	The name of the context in which this service is configured.
Bind	Status of connectivity of this service with context and IP address.
Max Subscribers	The number of subscribers are allowed to configure in this service.
Local IP Address	IP address to which this service is bound and communicate with HA.
Local IP Port	The port number on which this service is to communicate with HA.
Lifetime	The maximum time that the FA session can exist before it becomes expired.
Registration Timeout	The maximum duration of inactivity for a session registration before it becomes expired.
Advt Lifetime	Lifetime for an advertisement message.
Advt Interval	Interval between two advertisement messages.
Num Advt	The total number of advertisement messages broadcasted.
Advt Prefix Length Extn	Indicates the setting of prefix extension length in advertisement message.
Reverse Tunnel	Status of reverse tunnel.
GRE Encapsulation	Status of Generic Routing Encapsulation (GRE).
Optimize Tunnel Reassembly	Status of tunnel reassembly optimization.
Allow Priv Addr w/o Rev Tunnel	Status of setting to allow private addresses without reverse tunnelling.
Dynamic MIP Key Update	Status of setting to update dynamic MIP key.
Ignore Dynamic MIP Key	Status of setting to ignore dynamic MIP keys.
Remove MN-AAA/MN-FAC extns	Status of setting to remove MN-AAA and/or MN-FA extensions from messages.
Standalone FA service	Show the standalone FA service status. If “Enabled” system performs as a standalone FA only.
Proxy MIP	Status of Proxy Mobile IP support.
Proxy MIP Max Retransmissions	Total number of retransmission for Proxy Mobile IP support.

Field	Description
Proxy MIP Retrans Timeout	Timeout duration in seconds between two of retransmissions for Proxy MIP support.
Proxy MIP Renew Percent Time:	Percentage of timeout duration. Once this much percent of timeout duration exhausted the Proxy MIP message will be retransmitted. For example, If retransmission timeout is set for 4 secs. and renew percent time is configured for 75%, the Proxy MIP messages will be retransmitted after 3 seconds.
SPI(s)	The configured Security Parameter Index (SPI) number between FA and HA.
FAHA	
Remote Addr	IP address of HA.
Hash Algorithm:	Hashing algorithm applicable for HA.
SPI Num	SPI number set for HA.
Replay Protection:	Type of reply protection enabled for reply messages.
Timestamp Tolerance	Total variation allowed in timestamp mismatch.
HA Monitoring:	Status of HA monitoring configuration.
GRE Sequence Numbers	Status of GRE sequence number setting in messages.
GRE Sequence Mode	Specifies the GRE sequence mode.
GRE reorder Timeout	Total timeout duration for GRE reorder.
GRE Checksum	Status of GRE Checksum setting in messages.
GRE Checksum Verification	Status of GRE Checksum verification setting.
Registration Revocation	Status of registration revocation setting.
Reg-Revocation I Bit	Status of I-bit setting for registration revocation.
Reg-Revocation Max Retries	Maximum number of retries allowed for registration revocation.
Reg-Revocation Timeout	Total duration allowed between two retries for registration revocation.
Reg-Rev on Internal Failure	Specifies whether registration revocation will be triggered on internal failure or not.
Default Subscriber	Name of the default subscriber.
Max sessions	Maximum number of subscriber sessions allowed.
Max challenge len	Length of challenge key for subscriber authentication.
Challenge Window	total number of windows opened for challenge.
Service Status	Status of this service.
MN-AAA Auth Policy	Specifies the lookup criteria for authentication policy between MN and AAA in RRP. Possible settings are: always ignore-after-handoff init-reg init-reg-except-handoff renew-and-dereg-noauth renew-reg-noauth
Optimize-Retries	Status of setting for optimized retries when authentication policy is not received for MN and AAA.

Field	Description
MN-HA Auth Policy	Specifies the lookup criteria for authentication policy between MN and HA in RRP.
AAA Distributed MIP Keys Override	Specifies the setting for the FA service to override dynamic keys from AAA with static keys to support MIP registration with HAs which do not support dynamic keys.
Newcall Policy	Specify that new call policy enabled or disabled to handle new calls.
Idle Timeout Mode	Idle timeout mode allowed for this service.
Ignore Stale Challenge	Status of setting to ignore old/stale challenge messages.
Limit Reg Lifetime	Status of setting to limit registration lifetime.
Dynamic HA Failover	Status of setting to handle dynamic HA failovers.
AAA HA override	Status of setting to override HA settings if received from AAA.
HA Failover	Status of setting to handle HA failovers.
Retrans Timeout	Timeout duration between two retransmission of probe on HA failover.
Retries Before Switchover	Total number of retries before switching to another HA.
Maximum retries	Total number of retries allowed.
Load Balance	Status of setting to handle HA performance issues or HAa failovers by load balancing.
HA Monitoring	Status of setting to monitor HA.
Inactivity Timeout	Timeout duration after which a probe message will be sent to HA.
Monitor Reply Timeout	Timeout duration to wait for reply from HA after which a probe message will be resent to HA.
Maximum retries	Total number of retries allowed.

Chapter 97

show ggsn-service

This chapter includes the `show ggsn-service` command output tables.

show ggsn-service sgsn-table

Table 237. show ggsn-service sgsn-table Command Output Descriptions

Field	Description
GTP Version	GPRS Tunnelling Protocol. (0) - GTPRS (1) - UMTS
Active	GTP condition. (I) - Inactive (A) - Active
GTPC Echo	GPRS Tunneling Protocol-Control message (D) - Disabled (E) - Enabled
PLMN Type	Public land mobile network type. (H) - Home (F) - Foreign (U) - Unknown
SGSN Stats	SGSN statistics. (A) - Available (U) - Unavailable
Service ID	GGSN Service ID.
SGSN Address	IP address of each active SGSN.
Restart Counter	The restart counter sent by the SGSN. Increments by 1 with each restart.
Number of Restarts	Number of times the restart of the particular SGSN is detected, i.e., the number of times a NEW restart counter is received from the SGSN in a GTPC request message.
Curr Subs	Number of current subscribers to each SGSN.
Max Subs	Maximum number of permitted subscribers to each SGSN.

show ggsn-service all

Displays the configuration information for all GGSN services configured on the system.

Table 238. show ggsn-service all Command Output Descriptions

Field	Description
Service name	The name of the GGSN service.
Context	The context name where the GGSN service is configured.
Associated PGW Service	The name of the P-GW service associated to the GGSN service.
Associated GTPU Service	The name of the GTP-U service associated to the GGSN service.
Accounting Context Name	The context name where the accounting configuration and/or interface(s) are configured.
dns-client Context Name	The context name in which a DNS client configuration is present.
Authorize	Enables/disables subscriber session authorization with HSS over S6b Diameter interface.
Fqdn-name	The name of Fully Qualified Domain Name (FQDN) which is used for authorization over S6b interface between GGSN and 3GPP AAA/HSS.
Bind	Binds the GGSN service to a logical IP interface serving as the Gn interface.
Local IP Address	The IP address (address) of the interface configured as the Gn interface.
Self PLMN	Specifies the GGSN's public land mobile network (PLMN) identifiers.
Retransmission Timeout	The time to control the retransmission of GTP control packets when no response is received from an SGSN.
Max Retransmissions	Indicates the maximum number of times that GTP control packets are retransmitted.
Restart Counter	Specifies the restart counter
Echo Interval	Specifies the frequency at which the GGSN service sends GTPv1-C Echo packets to the SGSN(s) it is configured to communicate with.
Guard Interval	Specifies the amount of time that must pass before a GGSN service treats a redundant PDP context request as a new request instead of a re-send of a previous request.
Setup Timeout	Specifies the maximum amount of time the GGSN service allows for the setting up of PDP contexts.
PLMN Policy	Specifies the public land mobile network (PLMN) policy.
Reject Code Policy	
Authentication Server Timeout	Specifies the reject code used by the GGSN if communication with an authentication server times out.
Accounting Server Timeout	Specifies the reject code used by the GGSN if communication with an accounting server times out.

Field	Description
Ran Procedure Ready	Specifies if the RAN Procedure Ready feature is enabled/disabled for the specified GGSN service.
NSAPI in Create PDP response	Specifies the Network Service Access Point Identifier in the Create PDP response.
Duplicate Subscriber Address Request	
trace-collection-entity	Specifies the trace collection entity which is the destination node in Network management where trace files are transferred to and stored.
Path Failure Detection on gtp msgs	Specifies the path failure detection policy on GTP-U echo messages that have been retransmitted the maximum number of retry times.
GTP Private Extensions	Specifies the customer specific private extension in GTP-C messages.
Max IP sessions	Specifies the maximum number of IP sessions.
Max PPP sessions	Specifies the maximum number of PPP sessions in GGSN service.
Max sessions	Specifies the total number of maximum sessions including IP and PPP in GGSN service.
Service Status	Specifies the status of the GGSN service.
Newcall Policy	Specifies if the new call related behavior of GGSN service is enabled/disabled when duplicate sessions with same IP address request is received.
MBMS Policy	Specifies the configured MBMS policy for Multicast and/or Broadcast mode in this GGSN service.
MBMS Charging ID Optimization	Specifies if the MBMS charging ID optimization is enabled/disabled for the GGSN service.
3GPP Qos to DSCP Mapping (for G-PDUs)	This group indicates the 3GPP QoS to DSCP mapping information.
qci 1: ef	Indicates the DSCP configured for QCI1 type of traffic.
qci 2: ef	Indicates the DSCP configured for QCI2 type of traffic.
qci 3: af11	Indicates the DSCP configured for QCI3 type of traffic.
qci 4: af11	Indicates the DSCP configured for QCI4 type of traffic.
qci 5: ef	Indicates the DSCP configured for QCI5 type of traffic.
qci 6: ef	Indicates the DSCP configured for QCI6 type of traffic.
qci 7: af21	Indicates the DSCP configured for QCI7 type of traffic.
qci 8: af21	Indicates the DSCP configured for QCI8 type of traffic.
qci 9: be	Indicates the DSCP configured for QCI9 type of traffic.
3GPP Qos to DSCP Mapping based on Alloc. Prio	This group indicates the 3GPP QoS to DSCP mapping information based on allocation priority.
qci 5 (Alloc.P 1): ef	Indicates the DSCP configured for QCI5 type of traffic with allocation priority 1.
qci 5 (Alloc.P 2): ef	Indicates the DSCP configured for QCI5 type of traffic with allocation priority 2.
qci 5 (Alloc.P 3): ef	Indicates the DSCP configured for QCI5 type of traffic with allocation priority 3.

Field	Description
qci 6 (Alloc.P 1): ef	Indicates the DSCP configured for QCI6 type of traffic with allocation priority 1.
qci 6 (Alloc.P 2): ef	Indicates the DSCP configured for QCI6 type of traffic with allocation priority 2.
qci 6 (Alloc.P 3): ef	Indicates the DSCP configured for QCI6 type of traffic with and allocation priority 3.
qci 7 (Alloc.P 1): af21	Indicates the DSCP configured for QCI7 type of traffic with allocation priority 1.
qci 7 (Alloc.P 2): af21	Indicates the DSCP configured for QCI7 type of traffic with allocation priority 2.
qci 7 (Alloc.P 3): af21	Indicates the DSCP configured for QCI7 type of traffic with allocation priority 3.
qci 8 (Alloc.P 1): af21	Indicates the DSCP configured for QCI8 type of traffic with allocation priority 1.
qci 8 (Alloc.P 2): af21	Indicates the DSCP configured for QCI8 type of traffic with allocation priority 2.
qci 8 (Alloc.P 3): af21	Indicates the DSCP configured for QCI8 type of traffic with allocation priority 3.
GTPC messages	Indicates the Best effort forwarding PHB for GTPC messages.
CC Behavior	Specifies the 3GPP behavior bit associated with the GGSN's charging characteristics.
Charging Characteristics (CC) Profiles	This group provides the charging characteristics profiles configured in this GGSN service.
Profile	Specifies the charging characteristic profile configured in this GGSN service
Bucket	Specifies the charging bucket configured for charging characteristic in this GGSN service
SGSN Configuration List	Specifies the list of SGSNs that this GGSN service is allowed to communicate with.

Chapter 98

show gmb

This chapter includes the **show gmb** command output tables.

show gmb statistics

Table 239. show gmb statistics Command Output Descriptions

Field	Description
MBMS Context Stats	
Total Current	Total number of MBMS contexts currently in active status on Gmb interface.
Total Setup	Total number of MBMS contexts are in setup status on Gmb interface.
Total Released	Total number of MBMS contexts release on Gmb interface.
Total Denied	Total number of MBMS contexts requests denied on Gmb interface.
MBMS UE	Total number of UEs in active/setup status or released/denied on this Gmb interface for MBMS service.
MBMS Mcast Bearer	Total number of multicast bearers in active/setup status or released/denied on this Gmb interface for MBMS service.
MBMS Bcast Bearer	Total number of broadcast bearers in active/setup status or released/denied on this Gmb interface for MBMS service.
MBMS UE Context Management Stats	
MBMS UE Auth	Total number of UE Auth Request messages received on this Gmb interface for MBMS service.
Accepted	Total number of UE Auth Request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of UE Auth Request messages received and denied on this Gmb interface for MBMS service.
MBMS UE Update	Total number of UE Update Request messages received on this Gmb interface for MBMS service.
Accepted	Total number of UE Update Request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of UE Update Request messages received and denied on this Gmb interface for MBMS service.
MBMS UE Delete Tx	Total number of UE Delete Request messages transmitted on this Gmb interface for MBMS service.
Accepted	Total number of UE Delete Request messages transmitted and accepted on this Gmb interface for MBMS service.
Denied	Total number of UE Delete Request messages transmitted and denied on this Gmb interface for MBMS service.
MBMS UE Delete Rx	Total number of UE Delete Request messages received on this Gmb interface for MBMS service.
Accepted	Total number of UE Delete Request messages received and accepted on this Gmb interface for MBMS service.

Field	Description
Denied	Total number of UE Delete Request messages received and denied on this Gmb interface for MBMS service.
Discarded	Total number of UE Delete Request messages received but discarded on this Gmb interface for MBMS service.
MBMS Bearer (Multicast) Context Management Stats	
MBMS Bearer Reg	Total number of Multicast Bearer Context Register request messages received on this Gmb interface for MBMS service.
Accepted	Total number of Multicast Bearer Context Register request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of Multicast Bearer Context Register request messages received and denied on this Gmb interface for MBMS service.
MBMS Bearer Dereg TX	Total number of Multicast Bearer Context Dereg Request messages transmitted on this Gmb interface for MBMS service.
Accepted	Total number of Multicast Bearer Context Dereg Request messages transmitted and accepted on this Gmb interface for MBMS service.
Denied	Total number of Multicast Bearer Context Dereg Request messages transmitted and denied on this Gmb interface for MBMS service.
MBMS Bearer Dereg RX	Total number of Multicast Bearer Context Dereg messages received on this Gmb interface for MBMS service.
Accepted	Total number of Multicast Bearer Context Dereg Request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of Multicast Bearer Context Dereg Request messages received and denied on this Gmb interface for MBMS service.
Discarded	Total number of Multicast Bearer Context Dereg Request messages received but discarded on this Gmb interface for MBMS service.
MBMS Mcast Sess Start	Total number of Multicast Session Start Request messages received on this Gmb interface for MBMS service.
Accepted	Total number of Multicast Session Start Request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of Multicast Session Start Request messages received and denied on this Gmb interface for MBMS service.
Discarded	Total number of Multicast Session Start Request messages received but discarded on this Gmb interface for MBMS service.
MBMS Mcast Sess Stop	Total number of Multicast Session Stop Request messages received on this Gmb interface for MBMS service.
Accepted	Total number of Multicast Session Stop Request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of Multicast Session Stop Request messages received and denied on this Gmb interface for MBMS service.

Field	Description
Discarded	Total number of Multicast Session Stop Request messages received but discarded on this Gmb interface for MBMS service.
MBMS Mcast Sess Update	Total number of Multicast Session Update Request messages received on this Gmb interface for MBMS service.
Accepted	Total number of Multicast Session Update Request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of Multicast Session Update Request messages received and denied on this Gmb interface for MBMS service.
Discarded	Total number of Multicast Session Update Request messages received but discarded on this Gmb interface for MBMS service.
MBMS Bearer (Broadcast) Context Management Stats	
MBMS Bcast Sess Start	Total number of Broadcast Session Start Request messages received on this Gmb interface for MBMS service.
Accepted	Total number of Broadcast Session Start Request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of Broadcast Session Start Request messages received and denied on this Gmb interface for MBMS service.
Discarded	Total number of Broadcast Session Start Request messages received but discarded on this Gmb interface for MBMS service.
MBMS Bcast Sess Stop	Total number of Broadcast Session Stop messages received on this Gmb interface for MBMS service.
Accepted	Total number of Broadcast Session Stop Request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of Broadcast Session Stop Request messages received and denied on this Gmb interface for MBMS service.
Discarded	Total number of Broadcast Session Stop Request messages received but discarded on this Gmb interface for MBMS service.
MBMS Bcast Sess Update	Total number of Broadcast Session Update messages received on this Gmb interface for MBMS service.
Accepted	Total number of Broadcast Session Update Request messages received and accepted on this Gmb interface for MBMS service.
Denied	Total number of Broadcast Session Update Request messages received and denied on this Gmb interface for MBMS service.
Discarded	Total number of Broadcast Session Update Request messages received but discarded on this Gmb interface for MBMS service.
MBMS Bearer (Unknown Service Type) Stats	
MBMS Unknown Sess Start denied	Total number of unknown type of Session Start messages received and denied on this Gmb interface for MBMS service.
MBMS Unknown Sess Stop denied	Total number of unknown type of Session Stop messages received and denied on this Gmb interface for MBMS service.

Field	Description
MBMS Unknown Sess Update denied	Total number of unknown type of Session Update messages received and denied on this Gmb interface for MBMS service.

Chapter 99

show gmm-sm

This chapter includes the **show gmm-sm** command output tables.

show gmm-sm statistics

Table 240. show gmm-sm statistics Command Output Descriptions

Field	Description
Session Statistics	
Attached Subscribers	Statistics for attached subscribers.
Total Attached	Total subscribers attached for 2G and 3G.
3G Attached	Total subscribers attached for 3G only.
2G Attached	Total subscribers attached for 3G only.
Home Subscribers	Statistics for attached home subscribers.
Total Home	Total home subscribers attached for 2G and 3G.
3G Home	Total home subscribers attached for 3G only.
2G Home	Total home subscribers attached for 3G only.
Visiting National Subscribers	Statistics for attached visiting national subscribers.
Total-Visiting-National	Total visiting national subscribers attached for 2G and 3G.
3G-Visiting-National	Total visiting national subscribers attached for 3G only.
2G-Visiting-National	Total visiting national subscribers attached for 3G only.
Visiting Foreign Subscribers	Statistics for attached visiting foreign subscribers.
Total-Visiting-Foreign	Total visiting foreign subscribers attached for 2G and 3G.
3G-Visiting-Foreign	Total visiting foreign subscribers attached for 3G only.
2G-Visiting-Foreign	Total visiting foreign subscribers attached for 2G only.
Network Sharing Subscribers	Statistics for network sharing subscribers.
3G-Supporting-UE	Description: This proprietary statistic indicates the total number of 3G Network Sharing Supporting User Equipment currently in the system. Triggers: Increments when a network sharing supporting UE connects with the 3G SGSN. Availability: per SGSN service, per RNC, per RA
3G-Non-Supporting-UE	Description: This proprietary statistic indicates the total number of 3G Network Sharing Non-supporting User Equipment currently in the system. Triggers: Increments when a network sharing non-supporting UE connects with the 3G SGSN. Availability: per SGSN service, per RNC, per RA
Subscribers in PMM-REGISTERED state	Total subscribers in PMM registered state, including connected and idle.
PMM-CONNECTED	Total number of subscribers in PMM connected state.
PMM-IDLE	Total number of subscribers in PMM idle state.

Field	Description
Activated Subscribers	Statistics for activated subscribers.
Total Activated	Total number of activated 2G and 3G subscriber.
3G Activated	Total number of activated 3G subscribers only.
2G Activated	Total number of activated 2G subscribers only.
Activate PDP Contexts	Statistics for activated PDP contexts.
Total Actv PDP Ctx	Total number of activated 2G and 3G PDP contexts.
3G-Actv Pdp Ctx	Total number of activated 3G PDP contexts only.
2G-Actv Pdp Ctx	Total number of activated 2G PDP contexts only.
Total Actv Pdp Ctx with Direct Tunnel	Total number of activated PDP contexts through direct tunnel.
Message Statistics	Indicates the statistics of messages.
Specific Procedures	Indicates the statistics related to specific procedures.
Attach Request	Total number of messages for Attach Request
Total-Attach	Indicates the statistics of total attach.
IMSI	Indicates the statistics of total attach through international mobile subscriber identity (IMSI).
Total-IMSI-Attach	Total international mobile subscriber identity (IMSI) attach including 2G and 3G.
3G-IMSI-Attach	Indicates the 3G-IMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total 3G-IMSI attach with GPRS only access.
Combined Attached	Total 3G-IMSI attach with combined (PS and CS) access.
2G-IMSI-Attach	Indicates the 2G-IMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total 2G-IMSI attach with GPRS only access.
Combined Attached	Total 2G-IMSI attach with combined (PS and CS) access.
PTMSI	Indicates the statistics of total attach through Packet-Temporary Mobile Subscriber Identity (P-TMSI).
Total-PTMSI-Attach	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) attach including 2G and 3G.
3G-PTMSI-Attach	Indicates the 3G-P-TMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total 3G-P-TMSI attach with GPRS only access.
Combined Attached	Total 3G-P-TMSI attach with combined (PS and CS) access.
2G-PTMSI-Attach	Indicates the 2G-P-TMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total 2G-P-TMSI attach with GPRS only access.
Combined Attached	Total 2G-P-TMSI attach with combined (PS and CS) access.
Attach Accept	Indicates the statistics of total attach accepts.
Total-Attach-Accept	Total attach accepts including 2G and 3G.

Field	Description
3G-Attach-Accept	Indicates the 3G-attach accept statistics for GPRS and non-GPRS.
Gprs-Attached	Total 3G-attach accepts with GPRS only access.
Comb-Attached	Total 3G-attach accepts with combined (PS and CS) access.
2G-Attach-Accept	Indicates the 2G-attach accept statistics for GPRS and non-GPRS.
Gprs-Attached	Total 2G-attach accepts with GPRS only access.
Comb-Attached	Total 2G-attach accepts with combined (PS and CS) access.
Attach Complete	Indicates the statistics of total attach completed.
Total-Attach-Complete	Total attach completed including 2G and 3G.
3G-Attach-Complete	Indicates the 3G-attach complete statistics for GPRS and non-GPRS.
2G-Attach-Complete	Total 3G-attach completed with GPRS only access.
Attach Reject	Total 3G-attach completed with combined (PS and CS) access.
Total-Attach-Reject	Indicates the 2G-attach complete statistics for GPRS and non-GPRS.
3G-Attach-Reject	Total 2G-attach completed with GPRS only access.
2G-Attach-Reject	Total 2G-attach completed with combined (PS and CS) access.
Routing Area Update Request	Indicates the statistics of RAU request.
Total-RAU	Indicates the total RAU request.
Total-Intra-SGSN-RAU	Total intra-SGSN RAU request messages.
Total-Ra-Up-Intra-SGSN-RAU	Total routing area update request messages for intra-SGSN RA updates.
3G-Ra-Up-Intra-SGSN-RAU	Total routing area update request messages for intra-SGSN RA updates for 3G.
2G-Ra-Up-Intra-SGSN-RAU	Total routing area update request messages for intra-SGSN RA updates for 2G.
Total-Periodic-Intra-RAU	Total periodic intra-RA update messages.
3G-Periodic-Intra-RAU	Total periodic intra-RA update messages for 3G.
2G-Periodic-Intra-RAU	Total periodic intra-RA update messages for 2G.
Total-Comb-Intra-SGSN-RAU	Total intra-SGSN RAU request messages for combined (PS and CS) services.
3G-Comb-Intra-SGSN-RAU	Total intra-SGSN RAU request messages for combined (PS and CS) 3G services.
2G-Comb-Intra-SGSN-RAU	Total intra-SGSN RAU request messages for combined (PS and CS) 2G services.
Total-PS-Inter-SGSN-RAU	Total packet switching inter-SGSN-RA update request messages.
3G-PS-Inter-SGSN-RAU	Total packet switched inter-SGSN-RA update request messages for 3G service.
2G-PS-Inter-SGSN-RAU	Total packet switched inter-SGSN-RA update request messages for 2G service.
Total-Comb-Inter-SGSN-RAU	Total combined (PS and CS) inter-SGSN-RA update request messages.
3G-Comb-Inter-SGSN-RAU	Total combined (PS and CS) inter-SGSN-RA update request messages for 3G service.
2G-Comb-Inter-SGSN-RAU	Total combined (PS and CS) inter-SGSN-RA update request messages for 2G service.

Field	Description
Routing Area Update Accept	Indicates the statistics of routing area update messages accepted.
Total-RAU-Accept	Total number of routing area update messages accepted.
3G-RAU-Accept	Total number of routing area update messages accepted for 3G service.
3G-Intra-SGSN-RAU-Accept	Total number of intra-SGSN routing area update messages accepted for 3G service.
RA-Updated	Total number of routing area information updated for 3G service.
Comb RA/LA-Updated	Total number of combined (PS and CS) routing area or location area information updated for 3G service.
2G-RAU-Accept	Total number of routing area update messages accepted for 2G service.
2G-Intra-SGSN-RAU-Accept	Total number of intra-SGSN routing area update messages accepted for 2G service.
RA-Updated	Total number of routing area information updated for 2G service.
Comb RA/LA-Updated	Total number of combined (PS and CS) routing area or location area information updated for 2G service.
3G-Inter-SGSN-RAU-Accept	Total number of inter-SGSN routing area update messages accepted for 3G service.
RA-Updated	Total number of routing area information updated for 3G service.
Comb RA/LA-Updated	Total number of combined (PS and CS) routing area or location area information updated for 3G service.
2G-RAU-Accept	Total number of routing area update messages accepted for 2G service.
2G-Inter-SGSN-RAU-Accept	Total number of inter-SGSN routing area update messages accepted for 2G service.
RA-Updated	Total number of routing area information updated for 2G service.
Comb RA/LA-Updated	Total number of combined (PS and CS) routing area or location area information updated for 2G service.
Routing Area Update Complete	Indicates the statistics of routing area update complete messages.
Total-RAU-Complete	Total number of routing area update complete messages.
3G-RAU-Complete	Total number of routing area update complete messages for 3G service.
2G-RAU-Complete	Total number of routing area update complete messages for 2G service.
Routing Area Update Reject	Indicates the statistics of routing area update reject messages.
Total-RAU-Reject	Total number of routing area update reject messages.
3G-RAU-Reject	Total number of routing area update reject messages for 3G service.
2G-RAU-Reject	Total number of routing area update reject messages for 2G service.
Detach Request	Indicates the statistics of detach request messages.
Total-Detach-Req	Total number of detach request messages.
Total-MS-Init-Detach-Req	Total number of MS initiated detach request.
3G-MS-Init-GPRS-Detach-Req	Total number of MS initiated GPRS (PS) detach request for 3G service.

Field	Description
3G-MS-Init-IMSI-Detach-Req	Total number of MS initiated IMSI (CS) detach request for 3G service.
3G-MS-Init-Comb-Detach-Req	Total number of MS initiated combined (IMSI and GPRS) detach request for 3G service.
2G-MS-Init-GPRS-Detach-Req	Total number of MS initiated GPRS detach request for 2G service.
2G-MS-Init-IMSI-Detach-Req	Total number of MS initiated IMSI detach request for 2G service.
2G-MS-Init-Comb-Detach-Req	Total number of MS initiated combined (PS and CS) detach request for 2G service.
Total-Nw-Init-Detach-Req	Total number of network initiated detach request.
3G-Nw-Init-Reattach-Req	Description: During the network initiated detach for 3G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach required" when it wants the MS to attach again for GPRS services. Triggers: Increments when a clear subscriber is performed. Availability: per RA, per RNC, per SGSN service
2G-Nw-Init-Reattach-Req	Description: During the network initiated detach for 2G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach required" when it wants the MS to attach again for GPRS services. Triggers: Increments when a clear subscriber is performed. Availability: per RA, per RNC, per GPRS service
3G-Nw-Init-Reattach-Not-Req	Description: During the network initiated detach for 3G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach not required" when it does not expect the MS to attach again for GPRS services. Triggers: Increments upon reception of a Cancel-Location (subscription-withdrawn) or a DSD (all-gprs-subscription withdrawn). Availability: per RA, per RNC, per SGSN service
2G-Nw-Init-Reattach-Not-Req	Description: During the network initiated detach for 2G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach not required" when it does not expect the MS to attach again for GPRS services. Triggers: Increments upon reception of a Cancel-Location (subscription-withdrawn) or a DSD (all-gprs-subscription withdrawn). Availability: per RA, per RNC, per GPRS service
3G-Nw-Init-IMSI-Detach	Description: When the SGSN loses the GS-context for the MS due to a VLR-reset indication, it notifies the MS by sending an IMSI-detach on the next signalling activity by the MS. Triggers: Increments upon VLR-reset indication and a next uplink activity from MS. Availability: per RA, per RNC, per SGSN service
2G-Nw-Init-IMSI-Detach	Description: When the SGSN loses the GS-context for the MS due to a VLR-reset indication, it notifies the MS by sending an IMSI-detach on the next signalling activity by the MS. Triggers: Increments upon VLR-reset indication and a next uplink activity from MS. Availability: per RA, per RNC, per GPRS service
Detach Accept	Indicates the statistics of detach request accept messages.
Total-Detach-Acc	Total number of detach request accept messages.
Total-MS-Init-Detach-Acc	Total number of MS initiated detach request accepted.
3G-MS-Init-Detach-Acc	Total number of MS initiated GPRS detach request accepted for 3G service.
2G-MS-Init-Detach-Acc	Total number of MS initiated IMSI detach request accepted for 2G service.

Field	Description
Total-Nw-Init-Detach-Acc	Total number of network initiated detach request accepted.
3G-Nw-Init-Detach-Acc	Total number of network initiated detach request for 3G service.
3G-Nw-Init-GPRS-Detach-Acc	Total number of network initiated GPRS (PS) detach request accepted for 3G service.
3G-Nw-Init-IMSI-Detach-Acc	Total number of network initiated IMSI (CS) detach request accepted for 3G service.
3G-Nw-Init-Comb-Detach-Acc	Total number of network initiated combined (PS and CS) detach request accepted for 3G service.
2G-Nw-Init-Detach-Acc	Total number of network initiated detach request for 2G service.
2G-Nw-Init-GPRS-Detach-Acc	Total number of network initiated GPRS (PS) detach request accepted for 2G service.
2G-Nw-Init-IMSI-Detach-Acc	Total number of network initiated IMSI (CS) detach request accepted for 2G service.
2G-Nw-Init-Comb-Detach-Acc	Total number of network initiated combined (PS and CS) detach request accepted for 2G service.
Service Request	Indicates the statistics of service request messages.
Total-Serv-Req	Indicates the statistics of total service request messages.
Total-Signalling-Serv-Req	Total signalling service requests messages.
3G-Signalling-Serv-Req	Total signalling service requests messages for 3G service.
2G-Signalling-Serv-Req	Total signalling service requests messages for 2G service.
Total-Page-Rsp-Serv-Req	Total paging response for service requests messages.
3G-Page-Rsp-Serv-Req	Total paging response for service requests messages for 3G service.
2G-Page-Rsp-Serv-Req	Total paging response for service requests messages for 2G service.
Total-Data-Serv-Req	Total data service requests messages.
3G-Data-Serv-Req	Total data service requests messages for 3G service.
2G-Data-Serv-Req	Total data service requests messages for 2G service.
Service Accept	Indicates the statistics of service request messages.
Total-Serv-Resp	Total service response messages.
3G-Service-Resp	Total service response messages for 3G service.
2G-Service-Resp	Total service response messages for 2G service.
Service Reject	Total paging response for service requests messages.
Total-Serv-Rej	Total service reject messages.
3G-Service-Rej	Total service reject messages for 3G service.
2G-Service-Rej	Total service reject messages for 2G service.
Paging Initiated	Indicates the statistics of paging initiated procedure.
Total-Page-Requests	Total paging request messages.
3G-PS-Page-Requests	Total paging request messages in packet switching (PS) domain for 3G service.

Field	Description
3G-CS-Page-Requests	Total paging request messages in circuit switching (CS) domain for 3G service.
2G-PS-Page-Requests	Total paging request messages in packet switching (PS) domain for 2G service.
2G-CS-Page-Requests	Total paging request messages in circuit switching (CS) domain for 2G service.
Total-Page-Responses	Total paging request response messages.
3G-PS-Page-Responses	Total paging request response messages in packet switching (PS) domain for 3G service.
3G-CS-Page-Responses	Total paging request response messages in circuit switching (CS) domain for 3G service.
2G-PS-Page-Responses	Total paging request response messages in packet switching (PS) domain for 2G service.
2G-CS-Page-Responses	Total paging request response messages in circuit switching (CS) domain for 2G service.
Gmm Status Message	Indicates the statistics of GPRS mobility management procedure status messages.
Total-Gmm-Status-Sent	Total GPRS mobility management procedure status messages sent.
3G-Gmm-Status-Sent	Total GPRS mobility management procedure status messages sent for 3G service.
2G-Gmm-Status-Sent	Total GPRS mobility management procedure status messages sent for 2G service.
Total-Gmm-Status-Rcvd	Total GPRS mobility management procedure status messages received.
3G-Gmm-Status-Rcvd	Total GPRS mobility management procedure status messages received for 3G service.
2G-Gmm-Status-Rcvd	Total GPRS mobility management procedure status messages received for 2G service.
Gmm Information Sent	Indicates the statistics of messages sent with GPRS mobility management information.
Total-Gmm-Information-Sent	Total messages sent with GPRS mobility management information.
3G-Gmm-Information-Sent	Total messages sent with GPRS mobility management information for 3G service.
2G-Gmm-Information-Sent	Total messages sent with GPRS mobility management information for 2G service.
Common Procedures	Indicates the statistics of common procedures in GPRS mobility management procedure.
Authentication And Ciphering Request	Indicates the statistics of authentication and ciphering request messages.
Total-Auth-Cipher-Req	Total authentication and ciphering request messages.
3G-Auth-Cipher-Req	Total authentication and ciphering request messages for 3G service.
2G-Auth-Cipher-Req	Total authentication and ciphering request messages for 2G service.
Authentication And Ciphering Response	Indicates the statistics of authentication and ciphering request response messages.
Total-Auth-Cipher-Resp	Total authentication and ciphering request response messages.
3G-Auth-Cipher-Resp	Total authentication and ciphering request response messages for 3G service.
2G-Auth-Cipher-Resp	Total authentication and ciphering request response messages for 2G service.
Authentication And Ciphering Response With SRES Mismatch	Indicates the statistics of authentication and ciphering request response messages having Signed RESponse (SRES) mismatch.

Field	Description
Total-Auth-Cipher-Resp with Sres Mismatch	Total authentication and ciphering request response messages having Signed RESponse (SRES) mismatch.
3G-Auth-Cipher-Resp with Sres Mismatch	Total authentication and ciphering request response messages having Signed RESponse (SRES) mismatch for 3G service.
2G-Auth-Cipher-Resp with Sres Mismatch	Total authentication and ciphering request response messages having Signed RESponse (SRES) mismatch for 2G service.
Authentication And Ciphering Reject	Indicates the statistics of authentication and ciphering request reject messages.
Total-Auth-Cipher-Rej	Total authentication and ciphering request reject messages.
3G-Auth-Cipher-Rej	Total authentication and ciphering request reject messages for 3G service.
2G-Auth-Cipher-Rej	Total authentication and ciphering request reject messages for 2G service.
Authentication And Ciphering Failure	Indicates the statistics of authentication and ciphering request failures.
Total-Auth-Cipher-Failure	Total authentication and ciphering request failures.
3G-Auth-Cipher-Mac-Failure	Total authentication and ciphering failures due to message authentication code (MAC) for 3G service.
2G-Auth-Cipher-Mac-Failure	Total authentication and ciphering failures due to message authentication code (MAC) for 2G service.
3G-Auth-Cipher-Sync-Failure	Total authentication and ciphering failures due to synchronisation for 3G service.
2G-Auth-Cipher-Syn-Failure	Total authentication and ciphering failures due to synchronisation for 2G service.
3G-Auth-Unacceptable	Total authentication and ciphering failures due to unacceptable delay for 3G service.
2G-Auth-Unacceptable	Total authentication and ciphering failures due to unacceptable delay for 2G service.
P-TMSI Realloc	Indicates the statistics of Packet-Temporary Mobile Subscriber Identity (P-TMSI) reallocation procedure.
Total-PTMSI Realloc	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) reallocation procedure.
3G-PTMSI Realloc	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure for 3G service.
2G-PTMSI Realloc	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure for 2G service.
P-TMSI Realloc Complete	Indicates the statistics of Packet-Temporary Mobile Subscriber Identity reallocation procedure completed.
Total-PTMSI Realloc Complete	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure completed.
3G-PTMSI Realloc Complete	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure completed for 3G service.
2G-PTMSI Realloc Complete	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure completed for 2G service.
Identity Request	Indicates the statistics of identity request messages.
Total-Identity-Req	Total identity request messages.

Field	Description
Total-IMSI-Identity-Req	Total international mobile subscriber identity (IMSI) identity request messages.
3G-IMSI-Identity-Req	Total IMSI identity request messages for 3G service.
2G-IMSI-Identity-Req	Total IMSI identity request messages for 2G service.
Total-IMEI-Identity-Req	Total international mobile equipment identity (IMEI) request messages.
3G-IMEI-Identity-Req	Total IMEI identity request messages for 3G service.
2G-IMEI-Identity-Req	Total IMEI identity request messages for 2G service.
Total-IMEISV-Identity-Req	Total international mobile equipment identity-software version (IMEI-SV) identity request messages.
3G-IMEISV-Identity-Req	Total IMEI-SV identity request messages for 3G service.
2G-IMEISV-Identity-Req	Total IMEI-SV identity request messages for 2G service.
Total-(P)TMSI-Identity-Req	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) request messages.
3G-(P)TMSI-Identity-Req	Total P-TMSI identity request messages for 3G service.
2G-(P)TMSI-Identity-Req	Total P-TMSI identity request messages for 2G service.
Identity Response	Indicates the statistics of identity request messages.
Total-Identity-Rsp	Total identity request response messages.
Total-IMSI-Identity-Rsp	Total international mobile subscriber identity (IMSI) identity request response messages.
3G-IMSI-Identity-Rsp	Total IMSI identity request response messages for 3G service.
2G-IMSI-Identity-Rsp	Total IMSI identity request response messages for 2G service.
Total-IMEI-Identity-Rsp	Total international mobile equipment identity (IMEI) request response messages.
3G-IMEI-Identity-Rsp	Total IMEI identity request response messages for 3G service.
2G-IMEI-Identity-Rsp	Total IMEI identity request response messages for 2G service.
Total-IMEISV-Identity-Rsp	Total international mobile equipment identity-software version (IMEI-SV) identity request response messages.
3G-IMEISV-Identity-Rsp	Total IMEI-SV identity request response messages for 3G service.
2G-IMEISV-Identity-Rsp	Total IMEI-SV identity request response messages for 2G service.
Total-(P)TMSI-Identity-Rsp	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) request response messages.
3G-(P)TMSI-Identity-Rsp	Total P-TMSI identity request response messages for 3G service.
2G-(P)TMSI-Identity-Rsp	Total P-TMSI identity request response messages for 2G service.
Total-Unknown-Identity-Rsp	Total identity request response messages for unknown identity.
3G-Unknown-Identity-Rsp	Total identity request response messages for unknown identity for 3G service.
2G-Unknown-Identity-Rsp	Total identity request response messages for unknown identity for 2G service.
Timers	Indicates the statistics of different message and procedure timers.
Total-T3350-Expiry	Total number of times the T3350 timer timed-out.

Field	Description
3G-T3350-Expiry	Total number of times the T3350 timer timed-out for 3G service.
2G-T3350-Expiry	Total number of times the T3350 timer timed-out for 2G service.
Total-T3360-Expiry	Total number of times the T3360 timer timed-out.
3G-T3360-Expiry	Total number of times the T3360 timer timed-out for 3G service.
2G-T3360-Expiry	Total number of times the T3360 timer timed-out for 2G service.
Total-T3370-Expiry	Total number of times the T3370 timer timed-out.
3G-T3370-Expiry	Total number of times the T3370 timer timed-out for 3G service.
2G-T3370-Expiry	Total number of times the T3370 timer timed-out for 2G service.
Total-T3322-Expiry	Total number of times the T3322 timer timed-out.
3G-T3322-Expiry	Total number of times the T3322 timer timed-out for 3G service.
2G-T3322-Expiry	Total number of times the T3322 timer timed-out for 2G service.
Total-T3313-Expiry	Total number of times the T3313 timer timed-out.
3G-T3313-Expiry	Total number of times the T3313 timer timed-out for 3G service.
2G-T3313-Expiry	Total number of times the T3313 timer timed-out for 2G service.
Ranap Procedures	Indicates the statistics of Radio Access Network Application Part (RANAP) procedures.
Initial UE Rcvd	Total number of initial user equipment (UE) messages received.
Common Id sent	Total number of common identifier messages sent.
Direct Transfer Sent	Total number of direct transfer messages sent.
Direct Transfer Rcvd	Total number of direct transfer messages received.
Security Mode Command	Total number of security mode commands received.
Security Mode Complete	Total number of security mode completed.
Security Mode Reject	Total number of security mode commands rejected.
Iu Release Request	Total number of Iu interface release request received.
Iu Release Command	Total number of Iu interface release commands received.
Iu Release Complete	Total number of Iu interface release completed.
Reset Rcvd	Total number of reset requests received.
Retransmitted Reset Rcvd	Total number of retransmitted reset requests received.
Reset Ack Sent	Total number of reset request acknowledgement sent.
Reset Sent	Total number of reset requests sent.
Retransmitted Reset Sent	Total number of reset requests retransmitted.
Reset Ack Rcvd	Total number of reset request acknowledgement received.
Resource Reset Rcvd	Total number of resource reset requests received.

Field	Description
Resource Reset Ack Sent	Total number of resource reset request acknowledgement sent.
Resource Reset Sent	Total number of resource reset request sent.
Resource Reset Ack Rcvd	Total number of resource reset request acknowledgement received.
Overload ctrl Rcvd	Total number of resource overload control message received.
PC Congested Received	Total number of point code (PC) congested message received.
Error Indication Rcvd	Total number of error indication message received.
Error Indication Sent	Total number of error indication message sent.
Relocation Required	Total number of message received for Serving Radio Network Subsystem (SRNS) relocation required.
Relocation Command	Total number of message received with SRNS relocation command.
Relocation Request	Total number of SRNS relocation requests received.
Relocation Request Ack	Total number of SRNS relocation requests Ack sent.
Relocation Failure	Total number of SRNS relocation failure messages received.
Relocation Prep Failure	Total number of SRNS relocation preparation failure messages received.
Relocation Cancel	Total number of SRNS relocation cancel messages received.
Relocation Cancel Ack	Total number of SRNS relocation cancel acknowledge messages sent.
Relocation Detect	Total number of SRNS relocation detected.
Relocation Complete	Total number of SRNS relocation completed.
Forward SRNS Context	Total number of SRNS contexts forwarded.
NAS-PDU Stats	Indicates the statistics of PDUs for network access server (NAS).
Received	Indicates the total all type of protocol data units received through NAS interface.
Sent	Indicates the total all type of protocol data units sent through NAS interface.
Total-Received-NAS-Pdu	Total all type of protocol data units received through NAS interface.
Total-Sent-NAS-Pdu	Total all type of protocol data units sent through NAS interface.
GMM-Received-NAS-Pdu	Total protocol data units received by GPRS mobility management (GMM) service through NAS interface.
GMM-Sent-NAS-Pdu	Total protocol data units sent by GMM service through NAS interface.
SM-Received-NAS-Pdu	Total protocol data units received by Service Management (SM) service through NAS interface.
SM-Sent-NAS-Pdu	Total protocol data units sent by SM service through NAS interface.
UnIdentified-NAS-Pdu	Total number of unknown type PDUs received through NAS interface.
Dropped NAS-PDUS	Indicates the statistics of protocol data units dropped through NAS interface.
Total-Dropped-NAS-Pdu	Total number of PDUs dropped through NAS interface.
Redirection Indication	Indicates the causes for redirection indication.

Field	Description
PLMN not allowed	Description: The Attach/RAU Reject is sent with GMM cause “PLMN not allowed” or any other values not specifically mapped to the other causes. Triggers: Increments when Attach-reject/RAU-reject is sent in a MOCN configuration and the RNC tries the Attach/RAU at the next SGSN with the specific cause. Availability: per RA, per RNC, per SGSN service
Location area not allowed	Description: The Attach/RAU Reject is sent with GMM cause “Location Area not allowed”. Triggers: Increments when Attach-reject/RAU-reject is sent in a MOCN configuration and the RNC tries the Attach/RAU at the next SGSN with the specific cause. Availability: per RA, per RNC, per SGSN service
Roaming not allowed in LA	Description: The Attach/RAU Reject is sent with GMM cause “Roaming not allowed in this location area”. Triggers: Increments when Attach-reject/RAU-reject is sent in a MOCN configuration and the RNC tries the Attach/RAU at the next SGSN with the specific cause. Availability: per RA, per RNC, per SGSN service
No GPRS services in PLMN	Description: The Attach/RAU Reject is sent with GMM cause “GPRS services not allowed in this PLMN”. Triggers: Increments when Attach-reject/RAU-reject is sent in a MOCN configuration and the RNC tries the Attach/RAU at the next SGSN with the specific cause. Availability: per RA, per RNC, per SGSN service
CS/PS co-ord required	Description: When the SGSN interacts with the IMSI of the MS, it rejects the MS to facilitate the RNC to choose the right CN operator. Triggers: Increments when Attach-reject/RAU-reject is sent in a MOCN configuration and the RNC tries the Attach/RAU at the next SGSN with the specific cause. Availability: per RA, per RNC, per SGSN service
Unknown Reasons	Description: The RANAP message is sent with none of the above mentioned valid cause values. If the value is non-zero, it reflects an error in SGSN software. Triggers: Increments when Attach-reject/RAU-reject is sent in a MOCN configuration and the RNC tries the Attach/RAU at the next SGSN with the specific cause. Availability: per RA, per RNC, per SGSN service
SMS Error Stats	Indicates the statistics of errors for short message service (SMS).
CP-ERROR (Tx)	Total number of control program errors sent (in upload direction) for short message service (SMS).
Network Overload Protection	
Attach requests queued in the pacing queue	Indicates the current total number of Attach Request messages in the pacing queue waiting to be processed.
Inter SGSN RAU requests queued in the pacing queue	Indicates the total number of Inter SGSN RAU Request messages that have been buffered in the pacing queue.
Number of Inter SGSN RAU and Attach requests in the pacing queue	Indicates the total number of Attach Request messages and Inter SGSN RAU Request messages that have been buffered in the pacing queue.
Attach requests successfully dequeued from the pacing queue	Indicates the total number of Attach Request messages that have been successfully removed from the pacing queue to be sent to the session manager for further processing.

Field	Description
InterSGSN RAU requests successfully dequeued from the pacing queue	Indicates the total number of Inter SGSN RAU Request messages that have successfully been removed from the pacing queue and sent to the session manager for further processing.
Attaches rejected	Indicates the total number of Attach Requests that were rejected due to a network overload situation.
InterSGSN RAUs rejected	Indicates the total number of Inter SGSN RAU Requests that were rejected due to a network overload situation.
Attaches dropped	Indicates the total number of Attaches that were dropped due to a network overload situation.
InterSGSN RAUs dropped	Indicates the total number of Inter SGSN RAU Requests that were dropped due to a network overload situation.
Attaches discarded due to excess wait time in the pacing queue	Indicates the total number of Attach Request messages that were discarded because the requests waited in the pacing queue for more than the t3310 time which would have resulted in a timeout at the MS.
InterSGSN RAUs discarded due to excess wait time in the pacing queue	Indicates the total number of Inter SGSN RAU messages that were discarded from the pacing queue as the requests waited more than the t3315 time which would have resulted in a timeout at the MS.
Session Management Messages Statistics	
Activate Context Request	Indicates the statistics of context activate request in session management service.
Total-Actv-Request	Total number of request messages received for 2G and 3G context activation including primary and secondary.
3G-Actv-Request	Total number of request messages received for 3G context activation including primary and secondary.
2G-Actv Request	Total number of request messages received for 2G context activation including primary and secondary.
Primary-Actv-Request	Total number of request messages received for 2G and 3G primary context activation.
3G-Primary-Actv-Request	Total number of request messages received for 3G primary context activation.
2G-Primary-Actv-Request	Total number of request messages received for 2G primary context activation.
Secondary-Actv-Request	Total number of request messages received for 2G and 3G secondary context activation.
3G-Secondary-Actv-Request	Total number of request messages received for 3G secondary context activation.
2G-Secondary-Actv-Request	Total number of request messages received for 2G secondary context activation.
Activate Context Accept	Indicates the statistics of context activate request accepted in session management service.
Total-Actv-Accept	Total number of request messages accepted for 2G and 3G context activation including primary and secondary type.
3G-Actv-Accept	Total number of request messages accepted for 3G context activation including primary and secondary type.
2G-Actv Accept	Total number of request messages accepted for 2G context activation including primary and secondary type.
Primary-Actv-Accept	Total number of request messages accepted for 2G and 3G primary context activation.

Field	Description
3G-Primary-Actv-Accept	Total number of request messages accepted for 3G primary context activation.
2G-Primary-Actv-Accept	Total number of request messages accepted for 2G primary context activation.
Secondary-Actv-Accept	Total number of request messages accepted for 2G and 3G secondary context activation.
3G-Secondary-Actv-Accept	Total number of request messages accepted for 3G secondary context activation.
2G-Secondary-Actv-Accept	Total number of request messages accepted for 2G secondary context activation.
ActivateContextReject	Indicates the statistics of request messages rejected for 2G and 3G context activation including primary and secondary type.
Total-Actv-Reject	Total number of request messages rejected for 2G and 3G context activation including primary and secondary type.
3G-Actv-Reject	Total number of request messages rejected for 3G context activation including primary and secondary type.
2G-Actv-Reject	Total number of request messages rejected for 2G context activation including primary and secondary type.
Primary-Actv-Reject	Total number of request messages rejected for 2G and 3G primary context activation.
3G-Primary-Actv-Reject	Total number of request messages rejected for 3G primary context activation.
2G-Primary-Actv-Reject	Total number of request messages rejected for 2G primary context activation.
Secondary-Actv-Reject	Total number of request messages rejected for 2G and 3G secondary context activation.
3G-Secondary-Actv-Reject	Total number of request messages rejected for 3G secondary context activation.
2G-Secondary-Actv-Reject	Total number of request messages rejected for 2G secondary context activation.
ActivateContextFailure	
Total-Actv-Failure	Total number of context activation failures for 2G and 3G services, including primary and secondary types.
3G-Actv-Failure	Total number of context activation failures for 3G services.
2G-Actv Failure	Total number of context activation failures for 2G services.
Primary-Actv-Failure	Total number of primary context activation for 2G and 3G service failed.
3G-Primary-Actv-Failure	Total number of primary context activation for 3G service failed.
2G-Primary-Actv-Failure	Total number of primary context activation for 2G service failed.
Secondary-Actv-Failure	Total number of secondary context activation for 2G and 3G service failed.
3G-Secondary-Actv-Failure	Total number of secondary context activation for 3G service failed.
2G-Secondary-Actv-Failure	Total number of secondary context activation for 2G and 3G service failed.
Duplicate Activate Request	Indicates the statistics of duplicate context activation requests for 2G and 3G service received.
Total-Dup-Actv Req Received	Total number of duplicate context activation requests for 2G and 3G service received.
Total-Dup-3G-Actv Req Received	Total number of duplicate context activation requests for 3G service received.

Field	Description
3G-Dup Req In PDP-ACTIVE State	Indicates the statistics of duplicate context activation requests for 3G service in PDP activate state.
Duplicate TI	Total number of duplicate context activation requests for 3G service in PDP active state with duplicate transaction identifiers (TIs).
Duplicate NSAPI	Total number of duplicate context activation requests for 3G service in PDP active state with duplicate Network Service Access Point Identifier (NSAPI) for 3G service.
Duplicate PDP-Addr and APN	Total number of duplicate context activation requests for 3G service in PDP active state with duplicate PDP address and access point name for 3G service.
Total-Dup-2G-Actv Req Received	Total number of duplicate context activation requests for 2G service received.
2G-Dup Req In PDP-ACTIVE State	Indicates the statistics of duplicate context activation requests for 2G service in PDP activate state.
Duplicate TI	Total number of duplicate context activation requests for 2G service in PDP active state with duplicate transaction identifiers (TIs).
Duplicate NSAPI	Total number of duplicate context activation requests for 2G service in PDP active state with duplicate Network Service Access Point Identifier (NSAPI).
Duplicate PDP-Addr and APN	Total number of duplicate context activation requests for 2G service in PDP active state with duplicate PDP address and access point name.
3G-Dup Req In NOT PDP-ACTIVE State	Indicates the statistics of duplicate context activation requests for 3G service which are not in PDP active state.
Duplicate TI	Total number of duplicate context activation requests for 3G service which are not in PDP active state with duplicate transaction identifiers (TIs).
Duplicate NSAPI	Total number of duplicate context activation requests for 3G service which are not in PDP active state with duplicate Network Service Access Point Identifier (NSAPI).
Duplicate PDP-Addr and APN	Total number of duplicate context activation requests for 3G service which are not in PDP active state with duplicate PDP address and access point name.
2G-Dup Req In NOT PDP-ACTIVE State	Indicates the statistics of duplicate context activation requests for 2G service which are not in PDP active state.
Duplicate TI	Total number of duplicate context activation requests for 2G service which are not in PDP active state with duplicate transaction identifiers (TIs).
Duplicate NSAPI	Total number of duplicate context activation requests for 2G service which are not in PDP active state with duplicate Network Service Access Point Identifier (NSAPI).
Duplicate PDP-Addr and APN	Total number of duplicate context activation requests for 2G service which are not in PDP active state with duplicate PDP address and access point name.
Request Pdp Context Activation	Indicates the statistics of PDP context activation requests for 2G and 3G service.
Total-Request-Pdp-Ctxt-Req	Total number of PDP context activation requests received for 2G and 3G service.
3G-Request-Pdp-Ctxt-Req	Total number of PDP context activation requests received for 3G service.
2G-Request-Pdp-Ctxt-Req	Total number of PDP context activation requests received for 2G service.

Field	Description
RequestPdp Context Activation Reject	Indicates the statistics of PDP context activation requests rejected for 2G and 3G service.
Total-Request-Pdp-Ctxt-Req Reject	Total number of PDP context activation requests rejected for 2G and 3G service.
3G-Request-Pdp-Ctxt-Req Reject	Total number of PDP context activation requests rejected for 3G service.
2G-Request-Pdp-Ctxt-Req Reject	Total number of PDP context activation requests rejected for 2G service.
Modify Context Request	Indicates the statistics of MS and network initiated PDP context modification requests received for 2G and 3G service.
Total-Modify-Request	Total number of MS and network initiated PDP context modification requests received for 2G and 3G service.
3G-Modify-Request	Total number of MS and network initiated PDP context modification requests received for 3G service.
2G-Modify Request	Total number of MS and network initiated PDP context modification requests received for 2G service.
MS-Modify-Request	Total number of MS initiated PDP context modification requests received for 2G and 3G service.
3G-MS-Modify-Request	Total number of MS initiated PDP context modification requests received for 3G service.
2G-MS-Modify-Request	Total number of MS initiated PDP context modification requests received for 2G service.
NW-Modify-Request	Total number of network initiated PDP context modification requests received for 2G and 3G service.
3G-NW-Modify-Request	Total number of network initiated PDP context modification requests received for 3G service.
2G-NW-Modify-Request	Total number of network initiated PDP context modification requests received for 2G service.
Modify Context Accept	Indicates the statistics of MS and network initiated PDP context modification requests accepted for 2G and 3G service.
Total-Modify-Accept	Total number of MS and network initiated PDP context modification requests accepted for 2G and 3G service.
3G-Modify-Accept	Total number of MS and network initiated PDP context modification requests accepted for 3G service.
2G-Modify-Accept	Total number of MS and network initiated PDP context modification requests accepted for 2G service.
MS-Modify-Accept	Total number of MS initiated PDP context modification requests accepted for 2G and 3G service.
3G-MS-Modify-Accept	Total number of MS initiated PDP context modification requests accepted for 3G service.
2G-MS-Modify-Accept	Total number of MS initiated PDP context modification requests accepted for 2G service.
NW-Modify-Accept	Total number of network initiated PDP context modification requests accepted for 2G and 3G service.

Field	Description
3G-NW-Modify-Accept	Total number of network initiated PDP context modification requests received for 3G service.
2G-NW-Modify-Accept	Total number of network initiated PDP context modification requests accepted for 2G service.
Modify Context Reject	Indicates the statistics of MS and network initiated PDP context modification requests rejected for 2G and 3G service.
Total-Modify-Reject	Total number of MS and network initiated PDP context modification requests rejected for 2G and 3G service.
3G-Modify-Reject	Total number of MS and network initiated PDP context modification requests rejected for 3G service.
2G-Modify-Reject	Total number of MS and network initiated PDP context modification requests rejected for 2G service.
MS-Modify-Reject	Total number of MS initiated PDP context modification requests rejected for 2G and 3G service.
3G-MS-Modify-Reject	Total number of MS initiated PDP context modification requests rejected for 3G service.
2G-MS-Modify-Reject	Total number of MS initiated PDP context modification requests rejected for 2G service.
NW-Modify-Reject	Total number of network initiated PDP context modification requests rejected for 2G and 3G service.
3G-NW-Modify-Reject	Total number of network initiated PDP context modification requests rejected for 3G service.
2G-NW-Modify-Reject	Total number of network initiated PDP context modification requests rejected for 2G service.
Deactivate Context Request	Indicates the statistics of MS and network initiated PDP context deactivation requests received for 2G and 3G service.
Total-Deactiv-Request	Total number of MS and network initiated PDP context deactivation requests received for 2G and 3G service.
3G-Deactiv-Request	Total number of MS and network initiated PDP context deactivation requests received for 3G service.
2G-Deactiv-Request	Total number of MS and network initiated PDP context deactivation requests received for 2G service.
MS-Deactiv-Request	Total number of MS initiated PDP context deactivation requests received for 2G and 3G service.
3G-MS-Deactiv-Request	Total number of MS initiated PDP context deactivation requests received for 3G service.
2G-MS-Deactiv-Request	Total number of MS initiated PDP context deactivation requests received for 2G service.
NW-Deactiv-Request	Total number of network initiated PDP context deactivation requests received for 2G and 3G service.
3G-NW-Deactiv-Request	Total number of network initiated PDP context deactivation requests received for 3G service.
2G-NW-Deactiv-Request	Total number of network initiated PDP context deactivation requests received for 2G service.
Deactivate Context Accept	Indicates the statistics of MS and network initiated PDP context deactivation requests accepted for 2G and 3G service.
Total-Deactiv-Accept	Total number of MS and network initiated PDP context deactivation requests accepted for 2G and 3G service.

Field	Description
3G-Deactiv-Accept	Total number of MS and network initiated PDP context deactivation requests accepted for 3G service.
2G-Deactiv-Accept	Total number of MS and network initiated PDP context deactivation requests accepted for 2G service.
MS-Deactiv-Accept	Total number of MS initiated PDP context deactivation requests accepted for 2G and 3G service.
3G-MS-Deactiv-Accept	Total number of MS initiated PDP context deactivation requests accepted for 3G service.
2G-MS-Deactiv-Accept	Total number of MS initiated PDP context deactivation requests accepted for 2G service.
NW-Deactiv-Accept	Total number of network initiated PDP context deactivation requests accepted for 2G and 3G service.
3G-NW-Deactiv-Accept	Total number of network initiated PDP context deactivation requests accepted for 3G service.
2G-NW-Deactiv-Accept	Total number of network initiated PDP context deactivation requests accepted for 2G service.
SM Status Messages	Indicates the statistics of the service manager status messages for 2G and 3G service.
Total-SM-Status-Sent	Total number of service manager status messages sent for 2G and 3G service
3G-SM-Status-Sent	Total number of service manager status messages sent for 3G service
2G-SM-Status-Sent	Total number of service manager status messages sent for 2G service
Total-SM-Status-Rcvd	Total number of service manager status messages received for 2G and 3G service
3G-SM-Status-Rcvd	Total number of service manager status messages received for 3G service
2G-SM-Status-Rcvd	Total number of service manager status messages received for 2G service
RNC Initiated RAB Messages	Indicates the statistics of the radio network controller (RNC) initiated radio access bearer (RAB) messages for 2G and 3G service.
Total Rab Mod Requested	Total number of requests for radio access bearer modification initiated by radio network controller.
Num Rab Mod	Total number of RAB modified on requests for modification initiated by radio network controller.
Total Rab Rel Requested	Total number of requests for radio access bearer release initiated by radio network controller.
Num Rab Rel	Total number of RAB modified on requests for release initiated by radio network controller.
SGSN Initiated RAB Messages	Indicates the statistics of the SGSN initiated radio access bearer (RAB) messages for 2G and 3G service.
Total Rab Assign Requested	Total number of SGSN initiated RAB assign requests messages received.
Total Rab Assign Rsp Rcvd	Total number of SGSN initiated RAB assign response messages received.
Rab Setup/Mod Attempted	Total number of SGSN initiated setup and modification attempted for RAB.
Rab Setup/Mod Accepted	Total number of SGSN initiated setup and modification accepted for RAB.
Rab Setup/Mod Timer Expired	Total number of SGSN initiated RAB setup and modification events where procedure timer exhausted.
Rab Setup/Mod Failed	Total number of SGSN initiated RAB setup and modification events failed.

Field	Description
Rab Rel Attempted	Total number of SGSN initiated RAB release procedure attempted.
Rab Rel Accepted	Total number of SGSN initiated RAB release procedure accepted.
Rab Rel Timer Expired	Total number of SGSN initiated RAB release procedure where procedure timer exhausted.
Rab Rel Failed	Total number of SGSN initiated RAB release procedure failed.
Rab Queued	Total number of SGSN initiated RAB messages in queue.
Rab Setup Reattempted (Diff IP)	Total number of SGSN initiated RAB setup reattempted with different IP address.
Total Set/Mod/Rel Rab Rejected	Total number of SGSN initiated RAB setup, modification/release rejected.
SRNS Context Transfer Messages	Indicates the statistics of SGSN radio network subsystem context transfer messages.
SRNS Context Req Send	Total number of SGSN radio network subsystem context transfer request messages sent.
SRNS Context Rsp Rcvd	Total number of SGSN radio network subsystem context transfer response messages received.
SRNS Context Req Timer Expired	Total number of events when timer exhausted for SGSN radio network subsystem context transfer request messages.
Total PDP-Ctxt Accepted	Total number of PDP context accepted for SGSN radio network subsystem.
Total PDP-Ctxt Rejected	Total number of PDP context rejected for SGSN radio network subsystem.
SRNS Data Fwd Cmd Send	Total number of SGSN radio network subsystem data forward commands sent.

show gmm-sm statistics verbose

Table 241. show gmm-sm statistics verbose Command Output Descriptions

Field	Description
Session Statistics	
Attached Subscribers	Statistics for attached subscribers.
Total Attached	Total subscribers attached for 2G and 3G.
3G Attached	Total subscribers attached for 3G only.
2G Attached	Total subscribers attached for 3G only.
Home Subscribers	Statistics for attached home subscribers.
Total Home	Total home subscribers attached for 2G and 3G.
3G Home	Total home subscribers attached for 3G only.
2G Home	Total home subscribers attached for 3G only.
Visiting National Subscribers	Statistics for attached visiting national subscribers.
Total-Visiting-National	Total visiting national subscribers attached for 2G and 3G.
3G-Visiting-National	Total visiting national subscribers attached for 3G only.
2G-Visiting-National	Total visiting national subscribers attached for 3G only.
Visiting Foreign Subscribers	Statistics for attached visiting foreign subscribers.
Total-Visiting-Foreign	Total visiting foreign subscribers attached for 2G and 3G.
3G-Visiting-Foreign	Total visiting foreign subscribers attached for 3G only.
2G-Visiting-Foreign	Total visiting foreign subscribers attached for 2G only.
Network Sharing Subscribers	This group displays the statistics for network sharing subscribers.
3G-Supporting-UE	This proprietary statistic indicates the total number of 3G Network Sharing Supporting User Equipment currently in the system. Triggers: Increments when a network sharing supporting UE connects with the 3G SGSN. Availability: per SGSN service, per RNC, per RA
3G-Non-Supporting-UE	This proprietary statistic indicates the total number of 3G Network Sharing Non-supporting User Equipment currently in the system. Triggers: Increments when a network sharing non-supporting UE connects with the 3G SGSN. Availability: per SGSN service, per RNC, per RA
Subscribers in PMM-REGISTERED state	Total subscribers in packet mobility management-registered (PMM-REGISTERED) state, including connected and idle.
PMM-CONNECTED	Total subscriber in PMM connected state.
PMM-IDLE	Total subscriber in PMM idle state.

Field	Description
Subscribers in GPRS-CONNECTED state	Total number of subscribers in GPRS-CONNECTED state. It is a Gauge type of counter.
GPRS-STANDBY	Total number of subscribers in GPRS-STANDBY state. It is a Gauge type of counter.
GPRS-READY	Total number of subscribers in GPRS-READY state. It is a Gauge type of counter.
Activated Subscribers	Indicates the statistics of activated subscribers.
Total Activated	Total number of activated 2G and 3G subscriber.
3G Activated	Total number of activated 3G subscribers only.
2G Activated	Total number of activated 2G subscribers only.
Activate PDP Contexts	Indicates the statistics of activated PDP contexts.
Total Actv PDP Ctx	Total number of activated 2G and 3G PDP contexts.
3G-Actv Pdp Ctx	Total number of activated 3G PDP contexts only.
2G-Actv Pdp Ctx	Total number of activated 2G PDP contexts only.
Total Actv Pdp Ctx with Direct Tunnel	Total number of activated PDP contexts through direct tunnel.
Message Statistics	Indicates the statistics of messages.
Specific Procedures	Indicates the statistics related to specific procedures.
Attach Request	Total number of messages for Attach Request.
Total-Attach	Indicates the statistics of total attach.
IMSI	Indicates the statistics of total attach through international mobile subscriber identity (IMSI).
Total-IMSI-Attach	Total international mobile subscriber identity (IMSI) attach including 2G and 3G.
3G-IMSI-Attach	Indicates the 3G-IMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total 3G-IMSI attach with GPRS only access.
Combined Attached	Total 3G-IMSI attach with combined (PS and CS) access.
2G-IMSI-Attach	Indicates the 2G-IMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total 2G-IMSI attach with GPRS only access.
Combined Attached	Total 2G-IMSI attach with combined (PS and CS) access.
PTMSI	Indicates the statistics of total attach through Packet-Temporary Mobile Subscriber Identity (P-TMSI).
Total-PTMSI-Attach	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) attach including 2G and 3G.
3G-PTMSI-Attach	Indicates the 3G-P-TMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total 3G-P-TMSI attach with GPRS only access.
Combined Attached	Total 3G-P-TMSI attach with combined (PS and CS) access.

Field	Description
2G-PTMSI-Attach	Indicates the 2G-P-TMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total 2G-P-TMSI attach with GPRS only access.
Combined Attached	Total 2G-P-TMSI attach with combined (PS and CS) access.
Local-PTMSI	Indicates the statistics of total attach through local Packet-Temporary Mobile Subscriber Identity (P-TMSI).
Total-loc-PTMSI-Attach	Total local Packet-Temporary Mobile Subscriber Identity (P-TMSI) attach including 2G and 3G.
3G-loc-PTMSI-Attach	Indicates the local 3G-P-TMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total local 3G-P-TMSI attach with GPRS only access.
Combined Attached	Total local 3G-P-TMSI attach with combined (PS and CS) access.
2G-loc-PTMSI-Attach	Indicates the local 2G-P-TMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total local 2G-P-TMSI attach with GPRS only access.
Combined Attached	Total local 2G-P-TMSI attach with combined (PS and CS) access.
Remote-PTMSI	Indicates the statistics of total attach through remote Packet-Temporary Mobile Subscriber Identity (P-TMSI).
Total-remo-PTMSI-Attach	Total remote Packet-Temporary Mobile Subscriber Identity (P-TMSI) attach including 2G and 3G.
3G-remote-PTMSI-Attach	Indicates the remote 3G-P-TMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total remote 3G-P-TMSI attach with GPRS only access.
Combined Attached	Total remote 3G-P-TMSI attach with combined (PS and CS) access.
2G-remote-PTMSI-Attach	Indicates the remote 2G-P-TMSI attach statistics for GPRS and non-GPRS.
GPRS-only Attached	Total remote 2G-P-TMSI attach with GPRS only access.
Combined Attached	Total remote 2G-P-TMSI attach with combined (PS and CS) access.
Retransmission	Indicates the statistics of messages retransmitted.
Ret-Total-Attach	Indicates the statistics of total attach requests retransmitted.
IMSI	Indicates the statistics of total attach through international mobile subscriber identity (IMSI) retransmitted.
Ret-Total-IMSI-Attach	Total international mobile subscriber identity (IMSI) attach including 2G and 3G retransmitted.
Ret-3G-IMSI-Attach	Indicates the 3G-IMSI attach statistics for GPRS and non-GPRS retransmitted.
GPRS-only Attached	Total 3G-IMSI attach with GPRS only access retransmitted.
Combined Attached	Total 3G-IMSI attach with combined (PS and CS) access misusages retransmitted.
Ret-2G-IMSI-Attach	Indicates the 2G-IMSI attach statistics for GPRS and non-GPRS retransmitted.
GPRS-only Attached	Total 2G-IMSI attach with GPRS only access retransmitted retransmitted.
Combined Attached	Total 2G-IMSI attach with combined (PS and CS) access retransmitted.

Field	Description
PTMSI	Indicates the statistics of total attach through Packet-Temporary Mobile Subscriber Identity (P-TMSI) retransmitted.
Ret-Total-PTMSI-Attach	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) attach including 2G and 3G retransmitted.
Ret-3G-PTMSI-Attach	Indicates the 3G-P-TMSI attach statistics for GPRS and non-GPRS retransmitted.
GPRS-only Attached	Total 3G-P-TMSI attach with GPRS only access retransmitted.
Combined Attached	Total 3G-P-TMSI attach with combined (PS and CS) access retransmitted.
Ret-2G-PTMSI-Attach	Indicates the 2G-P-TMSI attach statistics for GPRS and non-GPRS retransmitted.
GPRS-only Attached	Total 2G-P-TMSI attach with GPRS only access retransmitted.
Combined Attached	Total 2G-P-TMSI attach with combined (PS and CS) access retransmitted.
Local-PTMSI	Indicates the statistics of total attach through local Packet-Temporary Mobile Subscriber Identity (P-TMSI) retransmitted.
Ret-Total-loc-PTMSI-Attach	Total local Packet-Temporary Mobile Subscriber Identity (P-TMSI) attach including 2G and 3G retransmitted.
Ret-3G-loc-PTMSI-Attach	Indicates the local 3G-P-TMSI attach statistics for GPRS and non-GPRS retransmitted.
GPRS-only Attached	Total local 3G-P-TMSI attach with GPRS only access retransmitted.
Combined Attached	Total local 3G-P-TMSI attach with combined (PS and CS) access retransmitted.
Ret-2G-loc-PTMSI-Attach	Indicates the local 2G-P-TMSI attach statistics for GPRS and non-GPRS retransmitted.
GPRS-only Attached	Total local 2G-P-TMSI attach with GPRS only access retransmitted.
Combined Attached	Total local 2G-P-TMSI attach with combined (PS and CS) access retransmitted.
Remote-PTMSI	Indicates the statistics of total attach through remote Packet-Temporary Mobile Subscriber Identity (P-TMSI) retransmitted.
Ret-Total-remo-PTMSI-Attach	Total remote Packet-Temporary Mobile Subscriber Identity (P-TMSI) attach including 2G and 3G retransmitted.
Ret-3G-remote-PTMSI-Attach	Indicates the remote 3G-P-TMSI attach statistics for GPRS and non-GPRS retransmitted.
GPRS-only Attached	Total remote 3G-P-TMSI attach with GPRS only access retransmitted.
Combined Attached	Total remote 3G-P-TMSI attach with combined (PS and CS) access retransmitted.
Ret-2G-remote-PTMSI-Attach	Indicates the remote 2G-P-TMSI attach statistics for GPRS and non-GPRS retransmitted.
GPRS-only Attached	Total remote 2G-P-TMSI attach with GPRS only access retransmitted.
Combined Attached	Total remote 2G-P-TMSI attach with combined (PS and CS) access retransmitted.
Attach Accept	Indicates the statistics of total attach accepts.
Total-Attach-Accept	Total attach accepts including 2G and 3G.
3G-Attach-Accept	Indicates the 3G-attach accept statistics for GPRS and non-GPRS.
Gprs-Attached	Total 3G-attach accepts with GPRS only access.

Field	Description
Comb-Attached	Total 3G-attach accepts with combined (PS and CS) access.
2G-Attach-Accept	Indicates the 2G-attach accept statistics for GPRS and non-GPRS.
Gprs-Attached	Total 2G-attach accepts with GPRS only access.
Comb-Attached	Total 2G-attach accepts with combined (PS and CS) access.
Retransmission	Indicates the statistics of total attach accepts retransmitted.
Ret-Total-Attach-Accept	Total attach accepts including 2G and 3G retransmitted.
Ret-3G-Attach-Accept	Indicates the 3G-attach accept retransmitted statistics for GPRS and non-GPRS.
Gprs-Attached	Total 3G-attach accepts with GPRS only access retransmitted.
Comb-Attached	Total 3G-attach accepts with combined (PS and CS) access retransmitted.
Ret-2G-Attach-Accept	Indicates the 2G-attach accept statistics for GPRS and non-GPRS retransmitted.
Gprs-Attached	Total 2G-attach accepts with GPRS only access retransmitted.
Comb-Attached	Total 2G-attach accepts with combined (PS and CS) access retransmitted.
Attach Complete	Indicates the statistics of total attach completed.
Total-Attach-Complete	Total attach completed including 2G and 3G.
3G-Attach-Complete	Indicates the 3G-attach complete statistics for GPRS and non-GPRS.
2G-Attach-Complete	Total 3G-attach completed with GPRS only access.
Attach Reject	Total 3G-attach completed with combined (PS and CS) access.
Total-Attach-Reject	Indicates the 2G-attach complete statistics for GPRS and non-GPRS.
3G-Attach-Reject	Total 2G-attach completed with GPRS only access.
2G-Attach-Reject	Total 2G-attach completed with combined (PS and CS) access.
Gprs-Attach Reject Causes	Indicates the statistics of causes for GPRS attach rejected for 2G and 3G service.
3G-IMSI Unknown in HLR	Total number of GPRS attach rejected for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of GPRS attach rejected for 2G service due to unknown IMSI in HLR.
3G-Illegal MS	Total number of GPRS attach rejected for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of GPRS attach rejected for 2G service due to illegal mobile subscriber.
3G-Illegal ME	Total number of GPRS attach rejected for 3G service due to illegal mobile equipment.
2G-Illegal ME	Total number of GPRS attach rejected for 2G service due to illegal mobile equipment.
3G-GPRS service not allowed	Total number of GPRS attach rejected for 3G service due to GPRS service not allowed for subscriber.
2G-GPRS service not allowed	Total number of GPRS attach rejected for 2G service due to GPRS service not allowed for subscriber.
3G-GPRS and Non-GPRS service not allowed	Total number of GPRS attach rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber.

Field	Description
2G-GPRS and Non-GPRS service not allowed	Total number of GPRS attach rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber.
3G-MSID not derived by Nw	Total number of GPRS attach rejected for 3G service due to network failed to derive MSID from attach message.
2G-MSID not derived by Nw	Total number of GPRS attach rejected for 2G service due to network failed to derive MSID from attach message.
3G-Implicitly detached	Total number of GPRS attach rejected for 3G service due to implicitly detach.
2G-Implicitly detached	Total number of GPRS attach rejected for 2G service due to implicitly detach.
3G-PLMN not allowed	Total number of GPRS attach rejected for 3G service due to specific PLMN not allowed.
2G-PLMN not allowed	Total number of GPRS attach rejected for 2G service due to specific PLMN not allowed.
3G-Location Area not allowed	Total number of GPRS attach rejected for 3G service due to specific location area not allowed.
2G-Location Area not allowed	Total number of GPRS attach rejected for 2G service due to specific location area not allowed.
3G-Roaming not allowed in this Location Area	Total number of GPRS attach rejected for 3G service due to roaming not allowed in specific location area.
2G-Roaming not allowed in this Location Area	Total number of GPRS attach rejected for 2G service due to roaming not allowed in specific location area.
3G-GPRS service not allowed in this PLMN	Total number of GPRS attach rejected for 3G service due to GPRS service not allowed in specific PLMN.
2G-GPRS service not allowed in this PLMN	Total number of GPRS attach rejected for 2G service due to GPRS service not allowed in specific PLMN.
3G-No suitable cells in this Location Area	Total number of GPRS attach rejected for 3G service due to non availability of suitable cell in specific location area.
2G-No suitable cells in this Location Area	Total number of GPRS attach rejected for 2G service due to non availability of suitable cell in specific location area.
3G-MSC not reachable	Total number of GPRS attach rejected for 3G service as MSC not reachable.
2G-MSC not reachable	Total number of GPRS attach rejected for 2G service as MSC not reachable.
3G-Network Failure	Total number of GPRS attach rejected for 3G service due to network failure.
2G-Network Failure	Total number of GPRS attach rejected for 2G service due to network failure.
3G-MAC Failure	Total number of GPRS attach rejected for 3G service due to message authenticate code (MAC) failure.
2G-MAC Failure	Total number of GPRS attach rejected for 2G service due to MAC failure.
3G-SYNC Failure	Total number of GPRS attach rejected for 3G service due to context synchronization failure.
2G-SYNC Failure	Total number of GPRS attach rejected for 2G service due to context synchronization failure.
3G-Congestion	Total number of GPRS attach rejected for 3G service due to network congestion.
2G-Congestion	Total number of GPRS attach rejected for 2G service due to network congestion.

Field	Description
3G-GSM Auth Unacceptable	Total number of GPRS attach rejected for 3G service due to unacceptable authentication from GSM network.
2G-GSM Auth Unacceptable	Total number of GPRS attach rejected for 2G service due to unacceptable authentication from GSM network.
3G-No PDP contexts activated	Total number of GPRS attach rejected for 3G service as PDP context is not activated.
2G-No PDP contexts activated	Total number of GPRS attach rejected for 2G service as PDP context is not activated.
3G-Retry from new cell	Total number of GPRS attach rejected for 3G service as PDP context activation was tried from new mobile cell.
2G-Retry from new cell	Total number of GPRS attach rejected for 2G service as PDP context activation was tried from new mobile cell.
3G-Semantically Wrong Msg	Total number of GPRS attach rejected for 3G service as attach request message is semantically wrong.
2G-Semantically Wrong Msg	Total number of GPRS attach rejected for 2G service as attach request message is semantically wrong.
3G-Invalid Mandatory Info	Total number of GPRS attach rejected for 3G service as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of GPRS attach rejected for 2G service as mandatory information in message is invalid.
3G-MSG type Non Existent	Total number of GPRS attach rejected for 3G service due to non-existent type of message.
2G-MSG type Non Existent	Total number of GPRS attach rejected for 2G service due to non-existent type of message.
3G-MSG type not compatible with protocol state	Total number of GPRS attach rejected for 3G service as message type is not compatible with protocol state.
2G-MSG type not compatible with protocol state	Total number of GPRS attach rejected for 2G service as message type is not compatible with protocol state.
3G-IE Non Existent	Total number of GPRS attach rejected for 3G service rejected due to non-existence of information element.
2G-IE Non Existent	Total number of GPRS attach rejected for 2G service rejected due to non-existence of information element.
3G-Conditional IE Error	Total number of GPRS attach rejected for 3G service due to error in conditional information element.
2G-conditional IE Error	Total number of GPRS attach rejected for 2G service due to error in conditional information element.
3G-Message not compatible with protocol state	Total number of GPRS attach rejected for 3G service as message is not compatible with protocol state.
2G-Message not compatible with protocol state	Total number of GPRS attach rejected for 2G service as message is not compatible with protocol state.
3G-protocol Error	Total number of GPRS attach rejected for 3G service due to protocol error in message.
2G-protocol Error	Total number of GPRS attach rejected for 2G service due to protocol error in message.

Field	Description
3G-Unknown cause	Total number of GPRS attach rejected for 3G service where cause is unknown or not specified here.
2G-Unknown cause	Total number of GPRS attach rejected for 2G service where cause is unknown or not specified here.
Comb-Attach Reject Causes	Indicates the statistics of causes for combined GPRS (PS and CS) attach rejected for 2G and 3G service.
3G-IMSI Unknown in HLR	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to unknown IMSI in HLR.
3G-Illegal MS	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to illegal mobile subscriber.
3G-Illegal ME	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to illegal mobile equipment.
2G-Illegal ME	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to illegal mobile equipment.
3G-GPRS service not allowed	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to GPRS service not allowed for subscriber.
2G-GPRS service not allowed	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to GPRS service not allowed for subscriber.
3G-GPRS and Non-GPRS service not allowed	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber.
2G-GPRS and Non-GPRS service not allowed	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber.
3G-MSId not derived by Nw	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to network failed to derive MSID from attach message.
2G-MSId not derived by Nw	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to network failed to derive MSID from attach message.
3G-Implicitly detached	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to implicitly detach.
2G-Implicitly detached	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to implicitly detach.
3G-PLMN not allowed	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to specific PLMN not allowed.
2G-PLMN not allowed	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to specific PLMN not allowed.
3G-Location Area not allowed	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to specific location area not allowed.

Field	Description
2G-Location Area not allowed	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to specific location area not allowed.
3G-Roaming not allowed in this Location Area	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to roaming not allowed in specific location area.
2G-Roaming not allowed in this Location Area	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to roaming not allowed in specific location area.
3G-GPRS service not allowed in this PLMN	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to GPRS service not allowed in specific PLMN.
2G-GPRS service not allowed in this PLMN	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to GPRS service not allowed in specific PLMN.
3G-No suitable cells in this Location Area	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to non availability of suitable cell in specific location area.
2G-No suitable cells in this Location Area	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to non availability of suitable cell in specific location area.
3G-MSC not reachable	Total number of combined GPRS (PS and CS) attach rejected for 3G service as MSC not reachable.
2G-MSC not reachable	Total number of combined GPRS (PS and CS) attach rejected for 2G service as MSC not reachable.
3G-Network Failure	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to network failure.
2G-Network Failure	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to network failure.
3G-MAC Failure	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to message authenticate code (MAC) failure.
2G-MAC Failure	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to MAC failure.
3G-SYNC Failure	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to context synchronization failure.
2G-SYNC Failure	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to context synchronization failure.
3G-Congestion	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to network congestion.
2G-Congestion	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to network congestion.
3G-GSM Auth Unacceptable	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to unacceptable authentication from GSM network.
2G-GSM Auth Unacceptable	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to unacceptable authentication from GSM network.
3G-No PDP contexts activated	Total number of combined GPRS (PS and CS) attach rejected for 3G service as PDP context is not activated.

Field	Description
2G-No PDP contexts activated	Total number of combined GPRS (PS and CS) attach rejected for 2G service as PDP context is not activated.
3G-Retry from new cell	Total number of combined GPRS (PS and CS) attach rejected for 3G service as PDP context activation was tried from new mobile cell.
2G-Retry from new cell	Total number of combined GPRS (PS and CS) attach rejected for 2G service as PDP context activation was tried from new mobile cell.
3G-Semantically Wrong Msg	Total number of combined GPRS (PS and CS) attach rejected for 3G service as attach request message is semantically wrong.
2G-Semantically Wrong Msg	Total number of combined GPRS (PS and CS) attach rejected for 2G service as attach request message is semantically wrong.
3G-Invalid Mandatory Info	Total number of combined GPRS (PS and CS) attach rejected for 3G service as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of combined GPRS (PS and CS) attach rejected for 2G service as mandatory information in message is invalid.
3G-MSG type Non Existent	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to non-existent type of message.
2G-MSG type Non Existent	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to non-existent type of message.
3G-MSG type not compatible with protocol state	Total number of combined GPRS (PS and CS) attach rejected for 3G service as message type is not compatible with protocol state.
2G-MSG type not compatible with protocol state	Total number of combined GPRS (PS and CS) attach rejected for 2G service as message type is not compatible with protocol state.
3G-IE Non Existent	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to inclusion of non-existent information element (IE) in message.
2G-IE Non Existent	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to inclusion of non-existent information element (IE) in message.
3G-Conditional IE Error	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to error in conditional information element.
2G-Conditional IE Error	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to error in conditional information element.
3G-Message not compatible with protocol state	Total number of combined GPRS (PS and CS) attach rejected for 3G service as message is not compatible with protocol state.
2G-Message not compatible with protocol state	Total number of combined GPRS (PS and CS) attach rejected for 2G service as message is not compatible with protocol state.
3G-protocol Error	Total number of combined GPRS (PS and CS) attach rejected for 3G service due to protocol error in message.
2G-protocol Error	Total number of combined GPRS (PS and CS) attach rejected for 2G service due to protocol error in message.
3G-Unknown cause	Total number of combined GPRS (PS and CS) attach rejected for 3G service where cause is unknown or not specified here.

Field	Description
2G-Unknown cause	Total number of combined GPRS (PS and CS) attach rejected for 2G service where cause is unknown or not specified here.
Attach Failure	This group displays the statistics for failures occurred during attach procedure.
Total Attach Failure	This group displays the statistics for total failures occurred during 2G and 3G attach procedure.
3G-Attach-Failure	Total number of failures occurred during attach procedure for 3G service.
Gprs-Attach-Failure	Total number of failures occurred during GPRS attach procedure for 3G service.
Comb-Attach-Failure	Total number of failures occurred during combined (PS and CS) service attach procedure for 3G service.
2G-Attach-Failure	Total number of failures occurred during attach procedure for 2G service.
Gprs-Attach-Failure	Total number of failures occurred during GPRS attach procedure for 2G service.
Comb-Attach-Failure	Total number of failures occurred during combined (PS and CS) service attach procedure for 2G service.
Gprs-Attach Failure Causes	This group displays the causes for failure occurred during GPRS attach procedure.
3G-Iu release before Attach over	Total number of 3G GPRS attach procedure failures due to 3G Iu interface release happened before attach procedure completed.
3G-Failure due to Other Ongoing Procedure	Total number of 3G GPRS attach procedure failed due to other procedure was in process while attach requested.
2G-Failure due to Other Ongoing Procedure	Total number of 2G attach procedure failed due to other procedure was in process while attach requested.
Comb-Attach Failure Causes	This group displays the causes for failure occurred during combined (PS and CS) service attach procedure.
3G-Iu release before Attach over	Total number of combined attach procedure failed due to 3G Iu interface release happened before completion of attach procedure
3G-Failure due to Other Ongoing Procedure	Total number of combined 3G attach procedure failed due to other procedure was in process while attach requested.
2G-Failure due to Other Ongoing Procedure	Total number of combined 2G attach procedure failed due to other procedure was in process while attach requested.
Routing Area Update Request	Indicates the statistics of RAU request.
Total-RAU	Indicates the total RAU request.
Total-Intra-SGSN-RAU	Total intra-SGSN RAU request messages.
Total-Ra-Up-Intra-SGSN-RAU	Total routing area update request messages for intra-SGSN RA updates.
3G-Ra-Up-Intra-SGSN-RAU	Total routing area update request messages for intra-SGSN RA updates for 3G.
2G-Ra-Up-Intra-SGSN-RAU	Total routing area update request messages for intra-SGSN RA updates for 2G.
Total-Periodic-Intra-RAU	Total periodic intra-RA update messages.
3G-Periodic-Intra-RAU	Total periodic intra-RA update messages for 3G.

Field	Description
2G-Periodic-Intra-RAU	Total periodic intra-RA update messages for 2G.
Total-Comb-Intra-SGSN-RAU	Total intra-SGSN RAU request messages for combined (PS and CS) services.
3G-Comb-Intra-SGSN-RAU	Total intra-SGSN RAU request messages for combined (PS and CS) 3G services.
2G-Comb-Intra-SGSN-RAU	Total intra-SGSN RAU request messages for combined (PS and CS) 2G services.
Total-PS-Inter-SGSN-RAU	Total packet switching inter-SGSN-RA update request messages.
3G-PS-Inter-SGSN-RAU	Total packet switched inter-SGSN-RA update request messages for 3G service.
2G-PS-Inter-SGSN-RAU	Total packet switched inter-SGSN-RA update request messages for 2G service.
Total-Comb-Inter-SGSN-RAU	Total combined (PS and CS) inter-SGSN-RA update request messages.
3G-Comb-Inter-SGSN-RAU	Total combined (PS and CS) inter-SGSN-RA update request messages for 3G service.
2G-Comb-Inter-SGSN-RAU	Total combined (PS and CS) inter-SGSN-RA update request messages for 2G service.
Total-Ps-Inter-Rat-RAU	Description: Total number of GPRS only Inter RAT RAU Requests received in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
3G-Ps-Inter-Rat-RAU	Description: Total number of GPRS only Inter RAT RAU Requests received in a 3G service from a 2G service. Availability: per RA, per RNC, per SGSN service
2G-Ps-Inter-Rat-RAU	Description: Total number of GPRS only Inter RAT RAU Requests received in a 2G service from a 3G service. Availability: per RA, per GPRS service
Total-Comb-Inter-Rat-RAU	Description: Total number of Combined Inter RAT RAU Requests received in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
3G-Comb-Inter-Rat-RAU	Description: Total number of Combined Inter RAT RAU Requests received in a 3G service from a 2G service. Availability: per RA, per RNC, per SGSN service
2G-Comb-Inter-Rat-RAU	Description: Total number of Combined Inter RAT RAU Requests received in a 2G service from a 3G service. Availability: per RA, per GPRS service
Total-Ps-Inter-Serv-RAU	Description: Total number of GPRS only Inter Service RAU Requests received in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
3G-Ps-Inter-Serv-RAU	Description: Total number of GPRS only Inter Service RAU Requests from one 3G service to another 3G service. Availability: per RA, per RNC, per SGSN service
2G-Ps-Inter-Serv-RAU	Description: Total number of GPRS only Inter Service RAU Requests from one 2G service to another 2G service. Availability: per RA, per GPRS service
Total-Comb-Inter-Serv-RAU	Description: Total number of Combined Inter Service RAU Requests received in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service

Field	Description
3G-Comb-Inter-Serv-RAU	Description: Total number of Combined Inter Service RAU Requests from one 3G service to another 3G service. Availability: per RA, per RNC, per SGSN service
2G-Comb-Inter-Serv-RAU	Description: Total number of Combined Inter Service RAU Requests from one 2G service to another 2G service. Availability: per RA, per GPRS service
Retransmission	Indicates the statistics of RAU requests retransmitted.
Ret-Total-RAU	Indicates the total RAU requests retransmitted.
Ret-Total-Intra-SGSN-RAU	Total intra-SGSN RAU request messages retransmitted.
Ret-Total-Ra-Up-Intra-SGSN	Total routing area update request messages retransmitted for intra-SGSN RA updates.
Ret-3G-Ra-Up-Intra-SGSN	Total routing area update request messages retransmitted for intra-SGSN RA updates for 3G.
Ret-2G-Ra-Up-Intra-SGSN	Total routing area update request messages retransmitted for intra-SGSN RA updates for 2G.
Ret-Total-Perio-Intra-RAU	Total periodic intra-RA update messages retransmitted.
Ret-3G-Perio-Intra-RAU	Total periodic intra-RA update messages retransmitted for 3G.
Ret-2G-Perio-Intra-RAU	Total periodic intra-RA update messages retransmitted for 2G.
Ret-Total-Comb-Intra-RAU	Total intra-SGSN RAU request messages retransmitted for combined (PS and CS) services.
Ret-3G-Comb-Intra-RAU	Total intra-RAU request messages retransmitted for combined (PS and CS) 3G services.
Ret-2G-Comb-Intra-RAU	Total intra-RAU request messages retransmitted for combined (PS and CS) 2G services.
Ret-Total-PS-Inter-SGSN-RAU	Total packet switching inter-SGSN-RA update request messages retransmitted.
Ret-3G-PS-Inter-SGSN-RAU	Total packet switched inter-SGSN-RA update request messages retransmitted for 3G service.
Ret-2G-PS-Inter-SGSN-RAU	Total packet switched inter-SGSN-RA update request messages retransmitted for 2G service.
Ret-Total-Comb-Inter-RAU	Total combined (PS and CS) inter-SGSN-RA update request messages retransmitted.
Ret-3G-Comb-Inter-RAU	Total combined (PS and CS) inter-SGSN-RA update request messages retransmitted for 3G service.
Ret-2G-Comb-Inter-RAU	Total combined (PS and CS) inter-SGSN-RA update request messages retransmitted for 2G service.
Ret-Total-Ps-Inter-Rat-RAU	Description: Total number of retransmitted GPRS only Inter RAT RAU Requests received in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
Ret-3G-Ps-Inter-Rat-RAU	Description: Total number of retransmitted GPRS only Inter RAT RAU Requests received in a 3G service from a 2G service. Availability: per RA, per RNC, per SGSN service
Ret-2G-Ps-Inter-Rat-RAU	Description: Total number of retransmitted GPRS only Inter RAT RAU Requests received in a 2G service from a 3G service. Availability: per RA, per GPRS service

Field	Description
Ret-Total-Comb-Inter-Rat-RAU	Description: Total number of retransmitted Combined Inter RAT RAU Requests received in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
Ret-3G-Comb-Inter-Rat-RAU	Description: Total number of retransmitted Combined Inter RAT RAU Requests received in a 3G service from a 2G service. Availability: per RA, per RNC, per SGSN service
Ret-2G-Comb-Inter-Rat-RAU	Description: Total number of retransmitted Combined Inter RAT RAU Requests received in a 2G service from a 3G service. Availability: per RA, per GPRS service
Ret-Total-Ps-Inter-Serv-RAU	Description: Total number of retransmitted GPRS only Inter Service RAU Requests received in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
Ret-3G-Ps-Inter-Serv-RAU	Description: Total number of retransmitted GPRS only Inter Service RAU Requests from one 3G service to another 3G service. Availability: per RA, per RNC, per SGSN service
Ret-2G-Ps-Inter-Serv-RAU	Description: Total number of retransmitted GPRS only Inter Service RAU Requests from one 2G service to another 2G service. Availability: per RA, per GPRS service
Ret-Total-Comb-Inter-Serv-RAU	Description: Total number of retransmitted Combined Inter Service RAU Requests received in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
Ret-3G-Comb-Inter-Serv-RAU	Description: Total number of retransmitted Combined Inter Service RAU Requests from one 3G service to another 3G service. Availability: per RA, per RNC, per SGSN service
Ret-2G-Comb-Inter-Serv-RAU	Description: Total number of retransmitted Combined Inter Service RAU Requests from one 2G service to another 2G service. Availability: per RA, per GPRS service
Routing Area Update Accept	Indicates the statistics of routing area update accept messages on system.
Total-RAU-Accept	Total number of routing area update accept messages sent by SGSN.
Total-Intra-RAU-Accept	Total number of intra-SGSN routing area update accept messages sent by SGSN.
Total-Ra-Up-Intra-RAU-Acc	Total number of intra-SGSN RAU accept messages sent by SGSN for 2G and 3G service.
3G-Ra-Up-Intra-RAU-Accept	Total number of intra-SGSN RAU accept messages sent by SGSN for 3G service.
2G-Ra-Up-Intra-RAU-Accept	Total number of intra-SGSN RAU accept messages sent by SGSN for 2G service.
Total-Periodic-RAU-Accept	Total number of periodic RAU accept messages sent by SGSN for 2G and 3G service.
3G-Periodic-RAU-Accept	Total number of periodic RAU accept messages sent by SGSN for 3G service.
2G-Periodic-RAU-Accept	Total number of periodic RAU accept messages sent by SGSN for 2G service.
Total-Comb-Intra-RAU-Acc	Total number of combined (PS and CS) intra-RAU accept messages sent by SGSN for 2G and 3G service.
3G-Comb-Intra-RAU-Acc	Total number of combined (PS and CS) intra-RAU accept messages sent by SGSN for 3G service.

Field	Description
2G-Comb-Intra-RAU-Acc	Total number of combined (PS and CS) intra-RAU accept messages sent by SGSN for 2G service.
Total-Inter-SGSN-RAU-Acc	This group displays inter SGSN RAU Accept message statistics on SGSN.
Total-PS-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in PS network for 2G and 3G services sent by SGSN.
3G-PS-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in PS network for 3G service sent by SGSN.
2G-PS-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in PS network for 2G service sent by SGSN.
Total-Comb-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in combined (PS and CS) network for 2G and 3G services sent by SGSN.
3G-Comb-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in combined (PS and CS) network for 3G services sent by SGSN.
2G-Comb-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in combined (PS and CS) network for 2G services sent by SGSN.
Total-Ps-Inter-Rat-RAU-Acc	Description: Total number of GPRS only Inter RAT RAU Accepts sent in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
3G-Ps-Inter-Rat-RAU-Acc	Description: Total number of GPRS only Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 2G service to a 3G service. Availability: per RA, per RNC, per SGSN service
2G-Ps-Inter-Rat-Acc	Description: Total number of GPRS only Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 3G service to a 2G service. Availability: per RA, per GPRS service
Total-Comb-Inter-Rat-RAU-Acc	Description: Total number of Combined Inter RAT RAU Accepts sent in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
3G-Comb-Inter-Rat-RAU-Acc	Description: Total number of Combined Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 2G service to a 3G service. Availability: per RA, per RNC, per SGSN service
2G-Comb-Inter-Rat-Acc	Description: Total number of Combined Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 3G service to a 2G service. Availability: per RA, per GPRS service
Total-Ps-Inter-Serv-RAU-Acc	Description: Total number of GPRS only Inter Service RAU Accepts sent in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
3G-Ps-Inter-Serv-RAU-Acc	Description: Total number of GPRS only Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 3G service to another 3G service. Availability: per RA, per RNC, per SGSN service
2G-Ps-Inter-Serv-RAU-Acc	Description: Total number of GPRS only Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service

Field	Description
Total-Comb-Inter-Serv-RAU-Acc	Description: Total number of Combined Inter Service RAU Accepts sent in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
3G-Comb-Inter-Serv-RAU-Acc	Description: Total number of Combined Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 3G service to another 3G service. Availability: per RA, per RNC, per SGSN service
2G-Comb-Inter-Serv-RAU-Acc	Description: Total number of Combined Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service
Retransmission	Indicates the statistics of routing area update messages retransmitted.
Ret-Total-RAU-Accept	Total number of routing area update accept messages retransmitted by SGSN.
Ret-Total-Intra-RAU-Accept	Total number of intra-SGSN routing area update accept messages retransmitted by SGSN.
Ret-Total-Ra-Up-Intra-RAU-Acc	Total number of intra-SGSN RAU accept messages retransmitted by SGSN for 2G and 3G service.
Ret-3G-Ra-Up-Intra-RAU-Acc	Total number of intra-SGSN RAU accept messages retransmitted by SGSN for 3G service.
Ret-2G-Ra-Up-Intra-RAU-Acc	Total number of intra-SGSN RAU accept messages retransmitted by SGSN for 2G service.
Ret-Total-Periodic-RAU-Acc	Total number of periodic RAU accept messages retransmitted by SGSN for 2G and 3G service.
Ret-3G-Periodic-RAU-Acc	Total number of periodic RAU accept messages retransmitted by SGSN for 3G service.
Ret-2G-Periodic-RAU-Acc	Total number of periodic RAU accept messages retransmitted by SGSN for 2G service.
Ret-Total-Comb-Intra-RAU-Acc	Total number of combined (PS and CS) intra-RAU accept messages retransmitted by SGSN for 2G and 3G service.
Ret-3G-Comb-Intra-RAU-Acc	Total number of combined (PS and CS) intra-RAU accept messages retransmitted by SGSN for 3G service.
Ret-2G-Comb-Intra-RAU-Acc	Total number of combined (PS and CS) intra-RAU accept messages retransmitted by SGSN for 2G service.
Ret-Total-Inter-SGSN-RAU-Acc	This group displays inter SGSN RAU Accept message statistics on SGSN.
Ret-Total-PS-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in PS network for 2G and 3G services retransmitted by SGSN.
Ret-3G-PS-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in PS network for 3G service retransmitted by SGSN.
Ret-2G-PS-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in PS network for 2G service retransmitted by SGSN.
Ret-Total-Comb-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in combined (PS and CS) network for 2G and 3G services retransmitted by SGSN.
Ret-3G-Comb-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in combined (PS and CS) network for 3G services retransmitted by SGSN.
Ret-2G-Comb-Inter-RAU-Acc	Total number of inter SGSN RAU accept messages in combined (PS and CS) network for 2G services retransmitted by SGSN.

Field	Description
Ret-Total-Ps-Inter-Rat-RAU-Acc	Description: Total number of retransmitted GPRS only Inter RAT RAU Accepts sent in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
Ret-3G-Ps-Inter-Rat-RAU-Acc	Description: Total number of retransmitted GPRS only Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 2G service to a 3G service. Availability: per RA, per RNC, per SGSN service
Ret-2G-Ps-Inter-Rat-Acc	Description: Total number of retransmitted GPRS only Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 3G service to a 2G service. Availability: per RA, per GPRS service
Ret-Total-Comb-Inter-Rat-RAU-Acc	Description: Total number of retransmitted Combined Inter RAT RAU Accepts sent in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
Ret-3G-Comb-Inter-Rat-RAU-Acc	Description: Total number of retransmitted Combined Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 3G service to a 2G service. Availability: per RA, per RNC, per SGSN service
Ret-2G-Comb-Inter-Rat-Acc	Description: Total number of retransmitted Combined Inter RAT RAU Accepts sent against RAU Requests from subscribers moving from a 2G service to a 3G service. Availability: per RA, per GPRS service
Ret-Total-Ps-Inter-Serv-RAU-Acc	Description: Total number of retransmitted GPRS only Inter Service RAU Accepts sent in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
Ret-3G-Ps-Inter-Serv-RAU-Acc	Description: Total number of retransmitted GPRS only Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 3G service to another 3G service. Availability: per RA, per RNC, per SGSN service
Ret-2G-Ps-Inter-Serv-RAU-Acc	Description: Total number of retransmitted GPRS only Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service
Ret-Total-Comb-Inter-Serv-RAU-Acc	Description: Total number of retransmitted Combined Inter Service RAU Accepts sent in both 2G and 3G services. Availability: per RA, per RNC, per GPRS/SGSN service
Ret-3G-Comb-Inter-Serv-RAU-Acc	Description: Total number of retransmitted Combined Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 3G service to another 3G service. Availability: per RA, per RNC, per SGSN service
Ret-2G-Comb-Inter-Serv-RAU-Acc	Description: Total number of retransmitted Combined Inter Service RAU Accepts sent against RAU Requests from subscribers moving from one 2G service to another 2G service. Availability: per RA, per GPRS service
Routing Area Update Complete	Indicates the statistics of routing area update complete messages.
Total-RAU-Complete	Total number of routing area update complete messages.
3G-RAU-Complete	Total number of routing area update complete messages for 3G service.
2G-RAU-Complete	Total number of routing area update complete messages for 2G service.
Routing Area Update Reject	Indicates the statistics of routing area update reject messages.

Field	Description
Total-RAU-Reject	Total number of routing area update reject messages.
Total-Intra-RAU-Reject	Total number of intra-SGSN routing area update reject messages sent by SGSN.
Total-Ra-up-Intra-RAU-Rej	Total number of intra-SGSN RAU reject messages reject by SGSN for 2G and 3G service.
3G-Ra-Up-Intra-RAU-Reject	Total number of intra-SGSN RAU reject messages sent by SGSN for 3G service.
2G-Ra-Up-Intra-RAU-Reject	Total number of intra-SGSN RAU reject messages sent by SGSN for 2G service.
Total-Periodic-RAU-Reject	Total number of periodic RAU reject messages sent by SGSN for 2G and 3G service.
3G-Periodic-RAU-Reject	Total number of periodic RAU reject messages sent by SGSN for 3G service.
2G-Periodic-RAU-Reject	Total number of periodic RAU reject messages sent by SGSN for 2G service.
Total-Comb-Intra-RAU-Rej	Total number of combined (PS and CS) intra-RAU reject messages sent by SGSN for 2G and 3G service.
3G-Comb-Intra-RAU-Reject	Total number of combined (PS and CS) intra-RAU reject messages sent by SGSN for 3G service.
2G-Comb-Intra-RAU-Reject	Total number of combined (PS and CS) intra-RAU reject messages sent by SGSN for 2G service.
Total-Inter-SGSN-RAU-Rej	This group displays inter SGSN RAU reject message statistics on SGSN.
Total-PS-Inter-RAU-Rej	Total number of inter SGSN RAU reject messages in PS network for 2G and 3G services sent by SGSN.
3G-PS-Inter-RAU-Rej	Total number of inter SGSN RAU reject messages in PS network for 3G service sent by SGSN.
2G-PS-Inter-RAU-Rej	Total number of inter SGSN RAU reject messages in PS network for 2G service sent by SGSN.
Total-Comb-Inter-RAU-Rej	Total number of inter SGSN RAU reject messages in combined (PS and CS) network for 2G and 3G services sent by SGSN.
3G-Comb-Inter-RAU-Rej	Total number of inter SGSN RAU reject messages in combined (PS and CS) network for 3G services sent by SGSN.
2G-Comb-Inter-RAU-Rej	Total number of inter SGSN RAU reject messages in combined (PS and CS) network for 2G services sent by SGSN.
Total-Inter-RAT-RAU-Rej	This group displays inter Radio Access Technology (RAT) RAU reject message statistics on SGSN.
Total-PS-Inter-RAT-RAU-Rej	Total number of inter RAT RAU reject messages in PS network for 2G and 3G services sent by SGSN.
3G-PS-Inter-RAT-RAU-Rej	Total number of inter RAT RAU reject messages in PS network for 3G service sent by SGSN.
2G-PS-Inter-RAT-RAU-Rej	Total number of inter RAT RAU reject messages in PS network for 2G service sent by SGSN.
Total-Comb-Inter-RAT-RAU-Rej	Total number of inter RAT RAU reject messages in combined (PS and CS) network for 2G and 3G services sent by SGSN.
3G-Comb-Inter-RAT-RAU-Rej	Total number of inter RAT RAU reject messages in combined (PS and CS) network for 3G services sent by SGSN.
2G-Comb-Inter-RAT-RAU-Rej	Total number of inter RAT RAU reject messages in combined (PS and CS) network for 2G services sent by SGSN.

Field	Description
Total-Inter-SRV-RAU-Rej	This group displays inter-SRV RAU reject message statistics on SGSN.
Total-PS-Inter-SRV-RAU-Rej	Total number of inter SRV RAU reject messages in PS network for 2G and 3G services sent by SGSN.
3G-PS-Inter-SRV-RAU-Rej	Total number of inter SRV RAU reject messages in PS network for 3G service sent by SGSN.
2G-PS-Inter-SRV-RAU-Rej	Total number of inter SRV RAU reject messages in PS network for 2G service sent by SGSN.
Total-Comb-Inter-SRV-RAU-Rej	Total number of inter SRV RAU reject messages in combined (PS and CS) network for 2G and 3G services sent by SGSN.
3G-Comb-Inter-SRV-RAU-Rej	Total number of inter SRV RAU reject messages in combined (PS and CS) network for 3G services sent by SGSN.
2G-Comb-Inter-SRV-RAU-Rej	Total number of inter SRV RAU reject messages in combined (PS and CS) network for 2G services sent by SGSN.
Intra Ra-Updated Routing Area Update Reject Causes	This group displays the causes for intra-RAT routing area update reject messages.
3G-IMSI Unknown in HLR	Total number of intra RAT routing area update requests rejected for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of intra RAT routing area update requests rejected for 2G service due to unknown IMSI in HLR.
3G-Illegal MS	Total number of intra RAT routing area update requests rejected for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of intra RAT routing area update requests rejected for 2G service due to illegal mobile subscriber.
3G-Illegal ME	Total number of intra RAT routing area update requests rejected for 3G service due to illegal mobile equipment.
2G-Illegal ME	Total number of intra RAT routing area update requests rejected for 2G service due to illegal mobile equipment.
3G-GPRS service not allowed	Total number of intra RAT routing area update requests rejected for 3G service due to GPRS service not allowed for subscriber.
2G-GPRS service not allowed	Total number of intra RAT routing area update requests rejected for 2G service due to GPRS service not allowed for subscriber.
3G-GPRS and Non-GPRS service not allowed	Total number of intra RAT routing area update requests rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber.
2G-GPRS and Non-GPRS service not allowed	Total number of intra RAT routing area update requests rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber.
3G-MSId not derived by Nw	Total number of intra RAT routing area update requests rejected for 3G service due to network failed to derive MSID from attach message.
2G-MSId not derived by Nw	Total number of intra RAT routing area update requests rejected for 2G service due to network failed to derive MSID from attach message.
3G-Implicitly detached	Total number of intra RAT routing area update requests rejected for 3G service due to implicitly detach.

Field	Description
2G-Implicitly detached	Total number of intra RAT routing area update requests rejected for 2G service due to implicitly detach.
3G-PLMN not allowed	Total number of intra RAT routing area update requests rejected for 3G service due to specific PLMN not allowed.
2G-PLMN not allowed	Total number of intra RAT routing area update requests rejected for 2G service due to specific PLMN not allowed.
3G-Location Area not allowed	Total number of intra RAT routing area update requests rejected for 3G service due to specific location area not allowed.
2G-Location Area not allowed	Total number of intra RAT routing area update requests rejected for 2G service due to specific location area not allowed.
3G-Roaming not allowed in this location area	Total number of intra RAT routing area update requests rejected for 3G service due to roaming not allowed in specific location area.
2G-Roaming not allowed in this location area	Total number of intra RAT routing area update requests rejected for 2G service due to roaming not allowed in specific location area.
3G-GPRS service not allowed in this PLMN	Total number of intra RAT routing area update requests rejected for 3G service due to GPRS service not allowed in specific PLMN.
2G-GPRS service not allowed in this PLMN	Total number of intra RAT routing area update requests rejected for 2G service due to GPRS service not allowed in specific PLMN.
3G-No suitable cells in this Location Area	Total number of intra RAT routing area update requests rejected for 3G service due to non availability of suitable cell in specific location area.
2G-No suitable cells in this Location Area	Total number of intra RAT routing area update requests rejected for 2G service due to non availability of suitable cell in specific location area.
3G-MSC not reachable	Total number of intra RAT routing area update requests rejected for 3G service as MSC not reachable.
2G-MSC not reachable	Total number of intra RAT routing area update requests rejected for 2G service as MSC not reachable.
3G-Network Failure	Total number of intra RAT routing area update requests rejected for 3G service due to network failure.
2G-Network Failure	Total number of intra RAT routing area update requests rejected for 2G service due to network failure.
3G-MAC Failure	Total number of intra RAT routing area update requests rejected for 3G service due to message authenticate code (MAC) failure.
2G-MAC Failure	Total number of intra RAT routing area update requests rejected for 2G service due to MAC failure.
3G-SYNC Failure	Total number of intra RAT routing area update requests rejected for 3G service due to context synchronization failure.
2G-SYNC Failure	Total number of intra RAT routing area update requests rejected for 2G service due to context synchronization failure.
3G-Congestion	Total number of intra RAT routing area update requests rejected for 3G service due to network congestion.

Field	Description
2G-Congestion	Total number of intra RAT routing area update requests rejected for 2G service due to network congestion.
3G-GSM Auth Unacceptable	Total number of intra RAT routing area update requests rejected for 3G service due to unacceptable authentication from GSM network.
2G-GSM Auth Unacceptable	Total number of intra RAT routing area update requests rejected for 2G service due to unacceptable authentication from GSM network.
3G-No PDP contexts activated	Total number of intra RAT routing area update requests rejected for 3G service as PDP context is not activated.
2G-No PDP contexts activated	Total number of intra RAT routing area update requests rejected for 2G service as PDP context is not activated.
3G-Retry from new cell	Total number of intra RAT routing area update requests rejected for 3G service as UE retried the update from new cell.
2G-Retry from new cell	Total number of intra RAT routing area update requests rejected for 2G service as UE retried the update from new cell.
3G-Semantically Wrong Msg	Total number of intra RAT routing area update request rejected for 3G service as attach request message is semantically wrong.
2G-Semantically Wrg Msg	Total number of intra RAT routing area update request rejected for 2G service as attach request message is semantically wrong.
3G-Invalid Mandatory Info	Total number of intra RAT routing area update request rejected for 3G service as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of intra RAT routing area update request rejected for 2G service as mandatory information in message is invalid.
3G-MSG type Non Existent	Total number of intra RAT routing area update request rejected for 3G service due to non-existent type of message.
2G-MSG type Non Existent	Total number of intra RAT routing area update request rejected for 2G service due to non-existent type of message.
3G-MSG type not compatible with protocol state	Total number of intra RAT routing area update request rejected for 3G service as message type is not compatible with protocol state.
2G-MSG type not compatible with protocol state	Total number of intra RAT routing area update request rejected for 2G service as message type is not compatible with protocol state.
3G-IE Non Existent	Total number of intra RAT routing area update request rejected for 3G service due to inclusion of non-existent information element (IE) in message.
2G-IE Non Existent	Total number of intra RAT routing area update request rejected for 2G service due to inclusion of non-existent information element (IE) in message.
3G-Conditional IE Error	Total number of intra RAT routing area update request rejected for 3G service due to error in conditional informational element.
2G-Conditional IE Error	Total number of intra RAT routing area update request rejected for 2G service due to error in conditional informational element.
3G-Message not compatible with protocol state	Total number of intra RAT routing area update request rejected for 3G service due to incompatible protocol state in message.

Field	Description
2G-Message not compatible with protocol state	Total number of intra RAT routing area update request rejected for 2G service due to incompatible protocol state in message.
3G-Protocol Error	Total number of intra RAT routing area update request rejected for 3G service due to protocol error in message.
2G-Protocol Error	Total number of intra RAT routing area update request rejected for 2G service due to protocol error in message.
3G-Unknown cause	Total number of intra RAT routing area update request rejected for 3G service due to reasons other than listed here in message.
2G-Unknown cause	Total number of intra RAT routing area update request rejected for 2G service due to reasons other than listed here in message.
Intra Periodic Routing Area Update Reject Causes	This group displays the intra RAT periodic RAU reject causes on SGSN.
3G-IMSI Unknown in HLR	Total number of intra RAT periodic RAU requests rejected for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of intra RAT periodic RAU requests rejected for 2G service due to unknown IMSI in HLR.
3G-Illegal MS	Total number of intra RAT periodic RAU requests rejected for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of intra RAT periodic RAU requests rejected for 2G service due to illegal mobile subscriber.
3G-Illegal ME	Total number of intra RAT periodic RAU requests rejected for 3G service due to illegal mobile equipment.
2G-Illegal ME	Total number of intra RAT periodic RAU requests rejected for 2G service due to illegal mobile equipment.
3G-GPRS service not allowed	Total number of intra RAT periodic RAU requests rejected for 3G service due to GPRS service not allowed for subscriber.
2G-GPRS service not allowed	Total number of intra RAT periodic RAU requests rejected for 2G service due to GPRS service not allowed for subscriber.
3G-GPRS and Non-GPRS service not allowed	Total number of intra RAT periodic RAU requests rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber.
2G-GPRS and Non-GPRS service not allowed	Total number of intra RAT periodic RAU requests rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber.
3G-MSId not derived by Nw	Total number of intra RAT periodic RAU requests rejected for 3G service due to network failed to derive MSID from attach message.
2G-MSId not derived by Nw	Total number of intra RAT periodic RAU requests rejected for 2G service due to network failed to derive MSID from attach message.
3G-Implicitly Detached	Total number of intra RAT periodic RAU requests rejected for 3G service due to implicitly detach.
2G-Implicitly Detached	Total number of intra RAT periodic RAU requests rejected for 2G service due to implicitly detach.

Field	Description
3G-PLMN not allowed	Total number of intraRAT periodic RAU requests rejected for 3G service due to specific PLMN not allowed.
2G-PLMN not allowed	Total number of intraRAT periodic RAU requests rejected for 2G service due to specific PLMN not allowed.
3G-Location Area not allowed	Total number of intraRAT periodic RAU requests rejected for 3G service due to specific location area not allowed.
2G-Location Area not allowed	Total number of intraRAT periodic RAU requests rejected for 2G service due to specific location area not allowed.
3G-Roaming not allowed in this Location Area	Total number of intraRAT periodic RAU requests rejected for 3G service due to roaming not allowed in specific location area.
2G-Roaming not allowed in this Location Area	Total number of intraRAT periodic RAU requests rejected for 2G service due to roaming not allowed in specific location area.
3G-GPRS service not allowed in this PLMN	Total number of intraRAT periodic RAU requests rejected for 3G service due to GPRS service not allowed in specific PLMN.
2G-GPRS service not allowed in this PLMN	Total number of intraRAT periodic RAU requests rejected for 2G service due to GPRS service not allowed in specific PLMN.
3G-No suitable cells in this Location Area	Total number of intraRAT periodic RAU requests rejected for 3G service due to non availability of suitable cell in specific location area.
2G-No suitable cells in this Location Area	Total number of intraRAT periodic RAU requests rejected for 2G service due to non availability of suitable cell in specific location area.
3G-MSC not reachable	Total number of intraRAT periodic RAU requests rejected for 3G service as MSC not reachable.
2G-MSC not reachable	Total number of intraRAT periodic RAU requests rejected for 2G service as MSC not reachable.
3G-Network Failure	Total number of intraRAT periodic RAU requests rejected for 3G service due to network failure.
2G-Network Failure	Total number of intraRAT periodic RAU requests rejected for 2G service due to network failure.
3G-MAC Failure	Total number of intraRAT periodic RAU requests rejected for 3G service due to message authenticate code (MAC) failure.
2G-MAC Failure	Total number of intraRAT periodic RAU requests rejected for 2G service due to MAC failure.
3G-SYNC Failure	Total number of intraRAT periodic RAU requests rejected for 3G service due to context synchronization failure.
2G-SYNC Failure	Total number of intraRAT periodic RAU requests rejected for 2G service due to context synchronization failure.
3G-Congestion	Total number of intraRAT periodic RAU requests rejected for 3G service due to network congestion.
2G-Congestion	Total number of intraRAT periodic RAU requests rejected for 2G service due to network congestion.

Field	Description
3G-GSM Auth Unacceptable	Total number of intra RAT periodic RAU requests rejected for 3G service due to unacceptable authentication from GSM network.
2G-GSM Auth Unacceptable	Total number of intra RAT periodic RAU requests rejected for 2G service due to unacceptable authentication from GSM network.
3G-No PDP contexts activated	Total number of intra RAT periodic RAU requests rejected for 3G service as PDP context is not activated.
2G-No PDP contexts activated	Total number of intra RAT periodic RAU requests rejected for 2G service as PDP context is not activated.
3G-Retry from new cell	Total number of intra RAT periodic RAU requests rejected for 3G service as UE retried the update from new cell.
2G-Retry from new cell	Total number of intra RAT periodic RAU requests rejected for 2G service as UE retried the update from new cell.
3G-Semantically Wrong Msg	Total number of intra RAT periodic RAU requests rejected for 3G service as attach request message is semantically wrong.
2G-Semantically Wrg Msg	Total number of intra RAT periodic RAU requests rejected for 2G service as attach request message is semantically wrong.
3G-Invalid Mandatory Info	Total number of intra RAT periodic RAU requests rejected for 3G service as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of intra RAT periodic RAU requests rejected for 2G service as mandatory information in message is invalid.
3G-MSG type Non Existent	Total number of intra RAT periodic RAU requests rejected for 3G service due to non-existent type of message.
2G-MSG type Non Existent	Total number of intra RAT periodic RAU requests rejected for 2G service due to non-existent type of message.
3G-MSG type not compatible with protocol state	Total number of intra RAT periodic RAU requests rejected for 3G service as message type is not compatible with protocol state.
2G-MSG type not compatible with protocol state	Total number of intra RAT periodic RAU requests rejected for 2G service as message type is not compatible with protocol state.
3G-IE Non Existent	Total number of intra RAT periodic RAU requests rejected for 3G service due to inclusion of non-existent information element (IE) in message.
2G-IE Non Existent	Total number of intra RAT periodic RAU requests rejected for 2G service due to inclusion of non-existent information element (IE) in message.
3G-Conditional IE Error	Total number of intra RAT periodic RAU requests rejected for 3G service due to error in conditional informational element.
2G-Conditionanl IE Error	Total number of intra RAT periodic RAU requests rejected for 2G service due to error in conditional informational element.
3G-Message not compatible with protocol state	Total number of intra RAT periodic RAU requests rejected for 3G service due to incompatible protocol state in message.
2G-Message not compatible with protocol state	Total number of intra RAT periodic RAU requests rejected for 2G service due to incompatible protocol state in message.

Field	Description
3G-Protocol Error	Total number of intra RAT periodic RAU requests rejected for 3G service due to protocol error in message.
2G-Protocol Error	Total number of intra RAT periodic RAU requests rejected for 2G service due to protocol error in message.
3G-Unknown cause	Total number of intra RAT periodic RAU requests rejected for 3G service due to reasons other than listed here in message.
2G-Unknown cause	Total number of intra RAT periodic RAU requests rejected for 2G service due to reasons other than listed here in message.
Intra Combo. Routing Area Update Reject Causes	This group displays the intra RAT combined (PS and CS) RAU request reject causes on SGSN.
3G-IMSI Unknown in HLR	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to unknown IMSI in HLR.
3G-Illegal MS	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to illegal mobile subscriber.
3G-Illegal ME	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to illegal mobile equipment.
2G-Illegal ME	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to illegal mobile equipment.
3G-GPRS service not allowed	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to GPRS service not allowed for subscriber.
2G-GPRS service not allowed	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to GPRS service not allowed for subscriber.
3G-GPRS and Non-GPRS service not allowed	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber.
2G-GPRS and Non-GPRS service not allowed	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber.
3G-MSID not derived by Nw	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to network failed to derive MSID from attach message.
2G-MSID not derived by Nw	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to network failed to derive MSID from attach message.
3G-Implicitly Detached	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to implicitly detach.
2G-Implicitly Detached	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to implicitly detach.
3G-PLMN not allowed	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to specific PLMN not allowed.

Field	Description
2G-PLMN not allowed	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to specific PLMN not allowed.
3G-Location Area not allowed	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to specific location area not allowed.
2G-Location Area not allowed	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to specific location area not allowed.
3G-Roaming not allowed in this Location Area	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to roaming not allowed in specific location area.
2G-Roaming not allowed in this Location Area	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to roaming not allowed in specific location area.
3G-GPRS service not allowed in this PLMN	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to GPRS service not allowed in specific PLMN.
2G-GPRS service not allowed in this PLMN	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to GPRS service not allowed in specific PLMN.
3G-No suitable cells in this Location Area	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to non availability of suitable cell in specific location area.
2G-No suitable cells in this Location Area	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to non availability of suitable cell in specific location area.
3G-MSC not reachable	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service as MSC not reachable.
2G-MSC not reachable	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service as MSC not reachable.
3G-Network Failure	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to network failure.
2G-Network Failure	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to network failure.
3G-MAC Failure	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to message authenticate code (MAC) failure.
2G-MAC Failure	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to MAC failure.
3G-SYNC Failure	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to context synchronization failure.
2G-SYNC Failure	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to context synchronization failure.
3G-Congestion	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to network congestion.
2G-Congestion	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to network congestion.
3G-GSM Auth Unacceptable	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to unacceptable authentication from GSM network.

Field	Description
2G-GSM Auth Unacceptable	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to unacceptable authentication from GSM network.
3G-No PDP contexts activated	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service as PDP context is not activated.
2G-No PDP contexts activated	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service as PDP context is not activated.
3G-Retry from new cell	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service as UE retried the update from new cell.
2G-Retry from new cell	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service as UE retried the update from new cell.
3G-Semantically Wrong Msg	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service as attach request message is semantically wrong.
2G-Semantically Wrg Msg	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service as attach request message is semantically wrong.
3G-Invalid Mandatory Info	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service as mandatory information in message is invalid.
3G-MSG type Non Existent	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to non-existent type of message.
2G-MSG type Non Existent	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to non-existent type of message.
3G-MSG type not compatible with protocol state	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service as message type is not compatible with protocol state.
2G-MSG type not compatible with protocol state	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service as message type is not compatible with protocol state.
3G-IE Non Existent	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to inclusion of non-existent information element (IE) in message.
2G-IE Non Existent	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to inclusion of non-existent information element (IE) in message.
3G-Conditional IE Error	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to error in conditional informational element.
2G-Conditional IE Error	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to error in conditional informational element.
3G-Message not compatible with protocol state	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to incompatible protocol state in message.
2G-Message not compatible with protocol state	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to incompatible protocol state in message.
3G-protocol Error	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to protocol error in message.

Field	Description
2G-protocolError	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to protocol error in message
3G-Unknown cause	Total number of intra RAT combined (PS and CS) RAU requests rejected for 3G service due to reasons other than listed here in message.
2G-Unknown cause	Total number of intra RAT combined (PS and CS) RAU requests rejected for 2G service due to reasons other than listed here in message.
Inter SGSN PS Only Routing Area Update Reject Causes	This group displays the inter SGSN PS-only RAU request reject causes on SGSN.
3G-IMSI Unknown in HLR	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to unknown IMSI in HLR.
3G-Illegal MS	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to illegal mobile subscriber.
3G-Illegal ME	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to illegal mobile equipment.
2G-Illegal ME	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to illegal mobile equipment.
3G-GPRS service not allowed	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to GPRS service not allowed for subscriber.
2G-GPRS service not allowed	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to GPRS service not allowed for subscriber.
3G-GPRS and Non-GPRS service not allowed	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber.
2G-GPRS and Non-GPRS service not allowed	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber.
3G-MSId not derived by Nw	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to network failed to derive MSID from attach message.
2G-MSId not derived by Nw	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to network failed to derive MSID from attach message.
3G-Implicitly Detached	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to implicitly detach.
2G-Implicitly Detached	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to implicitly detach.
3G-PLMN not allowed	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to specific PLMN not allowed.
2G-PLMN not allowed	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to specific PLMN not allowed.

Field	Description
3G-Location Area not allowed	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to specific location area not allowed.
2G-Location Area not allowed	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to specific location area not allowed.
3G-Roaming not allowed in this Location Area	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to roaming not allowed in specific location area.
2G-Roaming not allowed in this Location Area	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to roaming not allowed in specific location area.
3G-GPRS service not allowed in this PLMN	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to GPRS service not allowed in specific PLMN.
2G-GPRS service not allowed in this PLMN	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to GPRS service not allowed in specific PLMN.
3G-No suitable cells in this Location Area	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to non availability of suitable cell in specific location area.
2G-No suitable cells in this Location Area	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to non availability of suitable cell in specific location area.
3G-MSC not reachable	Total number of inter SGSN PS-only RAU requests rejected for 3G service as MSC not reachable.
2G-MSC not reachable	Total number of inter SGSN PS-only RAU requests rejected for 2G service as MSC not reachable.
3G-Network Failure	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to network failure.
2G-Network Failure	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to network failure.
3G-MAC Failure	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to message authenticate code (MAC) failure.
2G-MAC Failure	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to MAC failure.
3G-SYNC Failure	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to context synchronization failure.
2G-SYNC Failure	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to context synchronization failure.
3G-Congestion	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to network congestion.
2G-Congestion	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to network congestion.
3G-GSM Auth Unacceptable	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to unacceptable authentication from GSM network.
2G-GSM Auth Unacceptable	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to unacceptable authentication from GSM network.

Field	Description
3G-No PDP contexts activated	Total number of inter SGSN PS-only RAU requests rejected for 3G service as PDP context is not activated.
2G-No PDP contexts activated	Total number of inter SGSN PS-only RAU requests rejected for 2G service as PDP context is not activated.
3G-Retry from new cell	Total number of inter SGSN PS-only RAU requests rejected for 3G service as UE retried the update from new cell.
2G-Retry from new cell	Total number of inter SGSN PS-only RAU requests rejected for 2G service as UE retried the update from new cell.
3G-Semantically Wrong Msg	Total number of inter SGSN PS-only RAU requests rejected for 3G service as attach request message is semantically wrong.
2G-Semantically Wrg Msg	Total number of inter SGSN PS-only RAU requests rejected for 2G service as attach request message is semantically wrong.
3G-Invalid Mandatory Info	Total number of inter SGSN PS-only RAU requests rejected for 3G service as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of inter SGSN PS-only RAU requests rejected for 2G service as mandatory information in message is invalid.
3G-MSG type Non Existent	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to non-existent type of message.
2G-MSG type Non Existent	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to non-existent type of message.
3G-MSG type not compatible with protocol state	Total number of inter SGSN PS-only RAU requests rejected for 3G service as message type is not compatible with protocol state.
2G-MSG type not compatible with protocol state	Total number of inter SGSN PS-only RAU requests rejected for 2G service as message type is not compatible with protocol state.
3G-IE Non Existent	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to inclusion of non-existent information element (IE) in message.
2G-IE Non Existent	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to inclusion of non-existent information element (IE) in message.
3G-Conditional IE Error	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to error in conditional informational element.
2G-Conditional IE Error	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to error in conditional informational element.
3G-Message not compatible with protocol state	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to incompatible protocol state in message.
2G-Message not compatible with protocol state	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to incompatible protocol state in message.
3G-Protocol Error	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to protocol error in message.
2G-Protocol Error	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to protocol error in message.

Field	Description
3G-Unknown cause	Total number of inter SGSN PS-only RAU requests rejected for 3G service due to reasons other than listed here in message.
2G-Unknown cause	Total number of inter SGSN PS-only RAU requests rejected for 2G service due to reasons other than listed here in message.
Inter SGSN Comb. Routing Area Update Reject Causes	This group displays the combined (PS and CS) inter-SGSN RAU request reject causes on SGSN.
3G-IMSI Unknown in HLR	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to unknown IMSI in HLR.
3G-Illegal MS	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to illegal mobile subscriber.
3G-Illegal ME	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to illegal mobile equipment.
2G-Illegal ME	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to illegal mobile equipment.
3G-GPRS service not allowed	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to GPRS service not allowed for subscriber.
2G-GPRS service not allowed	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to GPRS service not allowed for subscriber.
3G-GPRS and Non-GPRS service not allowed	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to GPRS and non-GPRS service not allowed for subscriber.
2G-GPRS and Non-GPRS service not allowed	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to GPRS and non-GPRS service not allowed for subscriber.
3G-MSID not derived by Nw	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to network failed to derive MSID from attach message.
2G-MSID not derived by Nw	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to network failed to derive MSID from attach message.
3G-Implicitly detached	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to implicitly detach.
2G-Implicitly detached	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to implicitly detach.
3G-PLMN not allowed	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to specific PLMN not allowed.
2G-PLMN not allowed	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to specific PLMN not allowed.
3G-Location Area not allowed	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to specific location area not allowed.

Field	Description
2G-Location Area not allowed	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to specific location area not allowed.
3G-Roaming not allowed in this location area	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to roaming not allowed in specific location area.
2G-Roaming not allowed in this location area	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to roaming not allowed in specific location area.
3G-GPRS service not allowed in this PLMN	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to GPRS service not allowed in specific PLMN.
2G-GPRS service not allowed in this PLMN	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to GPRS service not allowed in specific PLMN.
3G-No suitable cells in this Location Area	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to non availability of suitable cell in specific location area.
2G-No suitable cells in this Location Area	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to non availability of suitable cell in specific location area.
3G-MSC not reachable	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service as MSC not reachable.
2G-MSC not reachable	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service as MSC not reachable.
3G-Network Failure	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to network failure.
2G-Network Failure	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to network failure.
3G-MAC Failure	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to message authenticate code (MAC) failure.
2G-MAC Failure	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to MAC failure.
3G-SYNC Failure	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to context synchronization failure.
2G-SYNC Failure	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to context synchronization failure.
3G-Congestion	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to network congestion.
2G-Congestion	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to network congestion.
3G-GSM Auth Unacceptable	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to unacceptable authentication from GSM network.
2G-GSM Auth Unacceptable	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to unacceptable authentication from GSM network.
3G-No PDP contexts activated	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service as PDP context is not activated.

Field	Description
2G-No PDP contexts activated	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service as PDP context is not activated.
3G-Retry from new cell	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service as update was retried from different cell than original RAU request by MS.
2G-Retry from new cell	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service as update was retried from different cell than original RAU request by MS.
3G-Semantically Wrong Msg	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service as attach request message is semantically wrong.
2G-Semantically Wrg Msg	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service as attach request message is semantically wrong.
3G-Invalid Mandatory Info	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service as mandatory information in message is invalid.
3G-MSG type Non Existent	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to non-existent type of message.
2G-MSG type Non Existent	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to non-existent type of message.
3G-MSG type not compatible with protocol state	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service as message type is not compatible with protocol state.
2G-MSG type not compatible with protocol state	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service as message type is not compatible with protocol state.
3G-IE Non Existent	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to inclusion of non-existent information element (IE) in message.
2G-IE Non Existent	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to inclusion of non-existent information element (IE) in message.
3G-Conditional IE Error	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to error in conditional information element.
2G-Conditional IE Error	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to error in conditional information element.
3G-Message not compatible with protocol state	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service as message is not compatible with protocol state.
2G-Message not compatible with protocol state	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service as message is not compatible with protocol state.
3G-protocol Error	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 3G service due to protocol error in message.
2G-protocol Error	Total number of combined (PS and CS) inter-SGSN routing area update requests rejected for 2G service due to protocol error in message.
3G-Unknown cause	Total number of combined (PS and CS) inter-SGSN attach rejected for 3G service where cause is unknown or not specified here.

Field	Description
2G-Unknown cause	Total number of combined (PS and CS) inter-SGSN attach rejected for 2G service where cause is unknown or not specified here.
Inter RAT PS Only Routing Area Update Reject Causes	
3G-IMSI Unknown in HLR	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “IMSI unknown at HLR”. Triggers: - On HLR sending a bad response to SAI-Req/GLU-Req - On getting zero auth vectors for HLR for a SAI-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-IMSI Unknown in HLR	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “IMSI unknown at HLR”. Triggers: - On HLR sending a bad response to SAI-Req/GLU-Req - On getting zero auth vectors for HLR for a SAI-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Illegal MS	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Illegal MS”. Triggers: - On HLR sending a bad response to SAI-Req/GLU-Req - On getting zero auth vectors for HLR for a SAI-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Illegal MS	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Illegal MS”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Illegal ME	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Illegal ME”. Triggers: - Unable to retrieve IMEI/IMEISV from MS - On IMEI verification failure with EIR - On getting unknown equipment failure from EIR/HLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-IllegalME	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Illegal ME”. Triggers: • On IMEI verification failure with EIR • On getting unknown equipment failure from EIR/HLR • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GPRS service not allowed	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: • On getting a cl (subs-with) while an attach/RAU is in progress • On getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req • For rejecting attaches due to subscriber control inactivity • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS service not allowed	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 2G service. Triggers: • On getting a cl (subs-with) while an attach/RAU is in progress • On getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req • For rejecting attaches due to subscriber control inactivity • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GPRS and Non-GPRS service not allowed	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 3G service. Triggers: • On getting “IMSI unknown” from HLR for SAI-Req/GLU-Req • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS and Non-GPRS service not allowed	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 2G service. Triggers: • On getting “IMSI unknown” from HLR for SAI-Req/GLU-Req • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-MSId not derived by Nw	Description: Total number of GPRS only inter-service routing area update request rejects sent with cause “MSID not derived by network” against Inter-Service-RAU requests in 3G service. Triggers: • On getting periodic RAU with old RAI as a non-local RAI • When PTMSI-IE is missing in RAU • When old RAI has invalid location area values (0x0000 or 0xffff) for PTMSI-attaches/RAUs • When getting a RAU with old RAI in 2G and PTMSI is unknown • When getting PTMSI-SIG-MISMATCH for a SGSN Context Request sent with IMSI Validated • When getting a RAU Request while an attach with the same peer-SGSN-PTMSI is in progress • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSId not derived by Nw	Description: Total number of GPRS only inter-service routing area update request rejects sent with cause “MSID not derived by network” against Inter-Service-RAU requests in 3G service. Triggers: • When SGSN-Context-Resp arrives with any cause other than “accepted” • When GMM-Identity-Req with MS fails • When GTP-Identity-Req with MS fails • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Implicitly Detached	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: • RAU at 3G when subscriber was detached from 2G • When we get a different IMSI in SGSN Context Response for an SGSN Context Request sent with IMSI validated • When we get RAU while awaiting a Detach Accept • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Implicitly Detached	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: • When we get an RAU from an unknown MS • On T3350 expiry for the Attach-accept • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-PLMN not allowed	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-PLMN not allowed	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Location Area not allowed	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Location Area not allowed	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Roaming not allowed in this Location Area	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Roaming area not allowed in the given location area”. Triggers: • When rejecting as a shared SGSN due to no operator accepting the given IMSI • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Roaming not allowed in this Location Area	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Roaming area not allowed in the given location area”. Triggers: • When rejecting as a shared SGSN due to no operator accepting the given IMSI • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-GPRS service not allowed in this PLMN	Description: Total number of GPRS only RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against Inter-Service-RAU Requests in 3G service. Triggers: - On getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS service not allowed in this PLMN	Description: Total number of GPRS only RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against Inter-Service-RAU Requests in 2G service. Triggers: - On getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-No suitable cells in this Location Area	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “No cells in location area”. Triggers: - On getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-No suitable cells in this Location Area	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “No cells in location area”. Triggers: - On getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MSC not reachable	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “MSC not reachable”. Triggers: - On sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-MSC not reachable	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “MSC not reachable”. Triggers: - On sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Network Failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Network Failure”. Triggers: - RNC is overloaded - Not enough credits at session manager - On getting cause “data missing from HLR” in SAI-Req/GLU-Req - Too many IUs for the same IMSI - On getting a RAU with a peer SGSN PTMSI when another Attach is ongoing with the same PTMSI - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Network Failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Network Failure”. Triggers: - On getting cause “data missing from HLR” in SAI-Req/GLU-Req - On XID failure for RAU - Inability to send an SGSN-Ctx-Req out for an RAU. - Inability to send a Check-IMEI Request out - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MAC Failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service

Field	Description
2G-MAC Failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-SYNC Failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-SYNC Failure	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Congestion	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Network Congestion”. Triggers: - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Congestion	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Network Congestion”. Triggers: - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GSM Auth Unacceptable	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-GSM Auth Unacceptable	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-No PDP contexts activated	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service

Field	Description
2G-No PDP contexts activated	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Retry from new cell	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Retry from new cell	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Semantically Wrong Msg	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Semantically wrong message”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Semantically Wrong Msg	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Semantically wrong message”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Invalid Mandatory Info	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Invalid Mandatory Info”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Invalid Mandatory Info	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Invalid Mandatory Info”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-MSG type Non Existent	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Message type does not exist”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSG type Non Existent	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Message type does not exist”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MSG type not compatible with protocol state	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Message type not compatible with protocol state”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSG type not compatible with protocol state	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Message type not compatible with protocol state”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-IE Non Existent	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “Information element not existent”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-IE Non Existent	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “Information element not existent”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-Conditional IE Error	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “error in conditional informational element”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Conditional IE Error	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “error in conditional informational element”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Message not compatible with protocol state	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “message not compatible with protocol state”. Triggers: - When getting an Attach Request before getting Relocation-complete during SRNS - When getting periodic RAU in a direct transfer message - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Message not compatible with protocol state	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “message not compatible with protocol state”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Protocol Error	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “protocol error”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Protocol Error	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “protocol error”. Triggers: - When the PLMN ID in BSSGP message does not match the configured PLMN at GPRS service - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Unknown cause	Description: Total number of GPRS only Inter RAT RAU Rejects in 3G service with cause “unknown error”. Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Unknown cause	Description: Total number of GPRS only Inter RAT RAU Rejects in 2G service with cause “unknown error”. Availability: per RA, per GPRS service
Inter RAT Comb. Routing Area Update Reject Causes	
3G-IMSI Unknown in HLR	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “IMSI unknown at HLR”. Triggers: - On HLR sending a bad response to a SAI-Req/GLU-Req - On getting zero auth vectors for HLR for a SAI-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-IMSI Unknown in HLR	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “IMSI unknown at HLR”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Illegal MS	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Illegal MS”. Triggers: - Unable to retrieve IMEI/IMEISV from MS - On IMEI verification failure with EIR - On getting unknown equipment failure from EIR/HLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Illegal MS	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Illegal MS”. Triggers: - On IMEI verification failure with EIR - On getting unknown equipment failure from EIR/HLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-IllegalME	Description: Total number of Combined Inter RAT RAU rejects in 3G service with cause “Illegal ME”. Triggers: • Unable to retrieve IMEI/IMEISV from MS • On IMEI verification failure with EIR • On getting unknown equipment failure from EIR/HLR • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-IllegalME	Description: Total number of Combined Inter RAT RAU rejects in 3G service with cause “Illegal ME”. Triggers: • On IMEI verification failure with EIR • On getting unknown equipment failure from EIR/HLR • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GPRS service not allowed	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: • On getting a cl (subs-with) while an attach/RAU is in progress • On getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req • For rejecting attaches due to subscriber control inactivity • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS service not allowed	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: • On getting a cl (subs-with) while an attach/RAU is in progress • On getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req • For rejecting attaches due to subscriber control inactivity • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-GPRS and Non-GPRS service not allowed	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 3G service. Triggers: - On getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS and Non-GPRS service not allowed	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 2G service. Triggers: - On getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MSId not derived by Nw	Description: Total number of Combined Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against Inter-Service-RAU Requests in 3G service. Triggers: - On getting periodic RAU with old RAI as a non-local RAI - When PTMSI-IE is missing in RAU - When old RAI has invalid location area values (0x0000 or 0xffff) for PTMSI-attaches/RAUs - When getting a RAU with old RAI in 2G and PTMSI is unknown - When getting PTMSI-SIG-MISMATCH for a SGSN Context Request sent with IMSI Validated - When getting a RAU Request while an attach with the same peer-SGSN-PTMSI is in progress - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSId not derived by Nw	Description: Total number of Combined Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against Inter-Service-RAU Requests in 2G service. Triggers: - When SGSN-Context-Resp arrives with any cause other than “accepted” - When GMM-Identity-Req with MS fails - When GTP-Identity-Req with MS fails - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-Implicitly Detached	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: • RAU at 3G when subscriber was detached from 2G • When we get a different IMSI in SGSN Context Response for an SGSN Context Request sent with IMSI validated • When we get RAU while awaiting a Detach Accept • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Implicitly Detached	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Implicitly detached”. Triggers: • When we get an RAU from an unknown MS • On T3350 expiry for the attach-accept • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-PLMN not allowed	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-PLMN not allowed	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Location Area not allowed	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Location Area not allowed	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service

Field	Description
3G-Roaming not allowed in this Location Area	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Roaming area not allowed in the given location area”. Triggers: - When rejecting as a shared SGSN due to no operator accepting the given IMSI - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Roaming not allowed in this Location Area	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-GPRS service not allowed in this PLMN	Description: Total number of Combined RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against Inter-Service-RAU Requests in 3G service. Triggers: - On getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS service not allowed in this PLMN	Description: Total number of Combined RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against Inter-Service-RAU Requests in 2G service. Triggers: - On getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-No suitable cells in this Location Area	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “No cells in location area”. Triggers: - On getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-No suitable cells in this Location Area	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “No cells in location area”. Triggers: - On getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-MSC not reachable	Description: Total number of Combined Inter RAT RAU rejects in 3G service with cause “MSC not reachable”. Triggers: - On sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSC not reachable	Description: Total number of Combined Inter RAT RAU rejects in 2G service with cause “MSC not reachable”. Triggers: - On sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Network Failure	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Network Failure”. Triggers: - RNC is overloaded - Not enough credits at session manager - On getting cause “data missing from HLR” in SAI-Req/GLU-Req - Too many IUs for the same IMSI - On getting a RAU with a peer SGSN PTMSI when another Attach is ongoing with the same PTMSI - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Network Failure	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Network Failure”. Triggers: - On getting cause “data missing from HLR” in SAI-Req/GLU-Req - On XID failure for RAU - Inability to send an SGSN-Ctx-Req out for an RAU - Inability to send a Check-IMEI Request out - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MAC Failure	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-MAC Failure	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-SYNC Failure	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-SYNC Failure	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Congestion	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Network Congestion”. Triggers: - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Congestion	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Network Congestion”. Triggers: - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GSM Auth Unacceptable	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-GSM Auth Unacceptable	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-No PDP contexts activated	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-No PDP contexts activated	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Retry from new cell	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Retry from new cell	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Semantically Wrong Msg	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Semantically wrong message”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Semantically Wrong Msg	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Semantically wrong message”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Invalid Mandatory Info	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Invalid Mandatory Info”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Invalid Mandatory Info	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Invalid Mandatory Info”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MSG type Non Existent	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Message type does not exist”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSG type Non Existent	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Message type does not exist”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MSG type not compatible with protocol state	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Message type not compatible with protocol state”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-MSG type not compatible with protocol state	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Message type not compatible with protocol state”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-IE Non Existent	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “Information element not existent”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-IE Non Existent	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “Information element not existent”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Conditional IE Error	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “error in conditional informational element”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Conditional IE Error	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “error in conditional informational element”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-Message not compatible with protocol state	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “message not compatible with protocol state”. Triggers: • When getting an Attach Request before getting Relocation-complete during SRNS • When getting periodic RAU in a direct transfer message • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Message not compatible with protocol state	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “message not compatible with protocol state”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Protocol Error	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “protocol error”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Protocol Error	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “protocol error”. Triggers: • When the PLMN ID in BSSGP message does not match the configured PLMN at GPRS service • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Unknown cause	Description: Total number of Combined Inter RAT RAU Rejects in 3G service with cause “unknown error”. Availability: per RA, per RNC, per SGSN service
2G-Unknown cause	Description: Total number of Combined Inter RAT RAU Rejects in 2G service with cause “unknown error”. Availability: per RA, per GPRS service
Inter Service PS Only Routing Area Update Reject Causes	
3G-IMSI Unknown in HLR	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “IMSI unknown at HLR”. Triggers: • On HLR sending a bad response to a SAI-Req or GLU-Req • On getting zero auth vectors for HLR for a SAI-Req • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-IMSI Unknown in HLR	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “IMSI unknown at HLR”. Triggers: • On HLR sending a bad response to a SAI-Req or GLU-Req • On getting zero auth vectors for HLR for a SAI-Req • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Illegal MS	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Illegal M”. Triggers: • On HLR sending a bad response to a SAI-Req or GLU-Req • On getting zero auth vectors for HLR for a SAI-Req • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Illegal MS	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Illegal MS”. • Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Illegal ME	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Illegal ME”. Triggers: • Unable to retrieve IMEI/IMEISV from MS • On IMEI verification failure with EIR • On getting unknown equipment failure from EIR/HLR • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Illegal ME	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Illegal ME”. Triggers: • On IMEI verification failure with EIR • On getting unknown equipment failure from EIR/HLR • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-GPRS service not allowed	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: • On getting a cl (subs-with) while an attach/RAU is in progress • On getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req • For rejecting attaches due to subscriber control inactivity • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS service not allowed	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 2G service. Triggers: • On getting a cl (subs-with) while an attach/RAU is in progress • On getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req • For rejecting attaches due to subscriber control inactivity • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GPRS and Non-GPRS service not allowed	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 3G service. Triggers: • On getting “IMSI unknown” from HLR for SAI-Req/GLU-Req • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS and Non-GPRS service not allowed	Description: Total number of GPRS only Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 2G service. Triggers: • On getting “IMSI unknown” from HLR for SAI-Req/GLU-Req • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-MSId not derived by Nw	Description: Total number of GPRS only Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against Inter-Service-RAU Requests in 3G service. Triggers: • On getting periodic RAU with old RAI as a non-local RAI • When PTMSI-IE is missing in RAU • When old RAI has invalid location area values (0x0000 or 0xffff) for PTMSI-attaches/RAUs • When getting a RAU with old RAI in 2G and PTMSI is unknown • When getting PTMSI-SIG-MISMATCH for a SGSN Context Request sent with IMSI Validated • When getting a RAU Request while an attach with the same peer-SGSN-PTMSI is in progress • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSId not derived by Nw	Description: Total number of GPRS only Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against Inter-Service-RAU Requests in 2G service. Triggers: • When SGSN-Context-Resp arrives with any cause other than “accepted” • When GMM-Identity-Req with MS fails • When GTP-Identity-Req with MS fails • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Implicitly Detached	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: • RAU at 3G when subscriber was detached from 2G • When we get a different IMSI in SGSN Context Response for an SGSN Context Request sent with IMSI validated • When we get RAU while awaiting a Detach Accept • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Implicitly Detached	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Implicitly detached”. Triggers: • When we get an RAU from an unknown MS • On T3350 expiry for the attach-accept • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-PLMN not allowed	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-PLMN not allowed	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Location Area not allowed	Description: Total number of GPRS only Inter Service RAU rejects in 3G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Location Area not allowed	Description: Total number of GPRS only Inter Service RAU rejects in 2G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Roaming not allowed in this Location Area	Description: Total number of GPRS only Inter Service RAU rejects in 3G service with cause “Roaming area not allowed in the given location area”. Triggers: • When rejecting as a shared SGSN due to no operator accepting the given IMSI • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Roaming not allowed in this Location Area	Description: Total number of GPRS only Inter Service RAU rejects in 2G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service

Field	Description
3G-GPRS service not allowed in this PLMN	Description: Total number of GPRS only RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against Inter-Service-RAU Requests in 3G service. Triggers: - On getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS service not allowed in this PLMN	Description: Total number of GPRS only RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against Inter-Service-RAU Requests in 2G service. Triggers: - On getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-No suitable cells in this Location Area	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “No cells in location area”. Triggers: - On getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-No suitable cells in this Location Area	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “No cells in location area”. Triggers: - On getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MSC not reachable	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “MSC not reachable”. Triggers: - On sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-MSC not reachable	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “MSC not reachable”. Triggers: - On sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Network Failure	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Network Failure”. Triggers: - RNC is overloaded - Not enough credits at session manager - On getting cause “data missing from HLR” in SAI-Req/GLU-Req - Too many IUs for the same IMSI - On getting a RAU with a peer SGSN PTMSI when another Attach is ongoing with the same PTMSI - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Network Failure	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Network Failure”. Triggers: - On getting cause “data missing from HLR” in SAI-Req/GLU-Req - On XID failure for RAU - Inability to send an SGSN-Ctx-Req out for an RAU. - Inability to send a Check-IMEI Request out - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MAC Failure	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service

Field	Description
2G-MAC Failure	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-SYNC Failure	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-SYNC Failure	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Congestion	Description: Total number of GPRS Only Inter Service RAU Rejects in 3G service with cause “Network Congestion”. Triggers: - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Congestion	Description: Total number of GPRS Only Inter Service RAU Rejects in 2G service with cause “Network Congestion”. Triggers: - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GSM Auth Unacceptable	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-GSM Auth Unacceptable	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-No PDP contexts activated	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service

Field	Description
2G-No PDP contexts activated	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Retry from new cell	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Retry from new cell	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Semantically Wrong Msg	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Semantically wrong message”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Semantically Wrong Msg	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Semantically wrong message”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Invalid Mandatory Info	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Invalid Mandatory Info”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Invalid Mandatory Info	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Invalid Mandatory Info”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-MSG type Non Existent	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Message type does not exist”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSG type Non Existent	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Message type does not exist”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MSG type not compatible with protocol state	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Message type not compatible with protocol state”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSG type not compatible with protocol state	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Message type not compatible with protocol state”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-IE Non Existent	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “Information element not existent”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-IE Non Existent	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “Information element not existent”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-Conditional IE Error	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “error in conditional informationalelement”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Conditional IE Error	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “error in conditional informationalelement”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Message not compatible with protocol state	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “message not compatible with protocol state”. Triggers: - When getting an Attach Request before getting Relocation-complete during SRNS - When getting periodic RAU in a direct transfer message - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Message not compatible with protocol state	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “message not compatible with protocol state”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Protocol Error	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “message not compatible with protocol state”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per GPRS service
2G-Protocol Error	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “protocol error”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per SGSN service
3G-Unknown cause	Description: Total number of GPRS only Inter Service RAU Rejects in 3G service with cause “unknown error”. Availability: per RA, per RNC, per SGSN service
2G-Unknown cause	Description: Total number of GPRS only Inter Service RAU Rejects in 2G service with cause “unknown error”. Availability: per RA, per GPRS service

Field	Description
Inter Service Comb. Routing Area Update Reject Causes	
3G-IMSI Unknown in HLR	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “IMSI unknown at HLR”. Triggers: - On HLR sending a bad response to a SAI-Req/GLU-Req - On getting zero auth vectors for HLR for a SAI-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-IMSI Unknown in HLR	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “IMSI unknown at HLR”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Illegal MS	Description: Total number of Combined Inter Service RAU rejects in 3G service with cause “Illegal MS”. Triggers: - Unable to retrieve IMEI/IMEISV from MS - On IMEI verification failure with EIR - On getting unknown equipment failure from EIR/HLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Illegal MS	Description: Total number of Combined Inter Service RAU rejects in 2G service with cause “Illegal MS”. Triggers: - On IMEI verification failure with EIR - On getting unknown equipment failure from EIR/HLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Illegal ME	Description: Total number of Combined Inter Service RAU rejects in 3G service with cause “Illegal ME”. Triggers: - Unable to retrieve IMEI/IMEISV from MS - On IMEI verification failure with EIR - On getting unknown equipment failure from EIR/HLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Illegal ME	Description: Total number of Combined Inter Service RAU rejects in 2G service with cause “Illegal ME”. Triggers: - On IMEI verification failure with EIR - On getting unknown equipment failure from EIR/HLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GPRS service not allowed	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 3G service. Triggers: - On getting a cl (subs-with) while an attach/RAU is in progress - On getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - For rejecting attaches due to subscriber control inactivity - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS service not allowed	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS services not allowed in this PLMN” against Inter-service-RAU Requests in 2G service. Triggers: - On getting a cl (subs-with) while an attach/RAU is in progress - On getting “Subscriber Unknown” failure from HLR for SAI-Req/GLU-Req - For rejecting attaches due to subscriber control inactivity - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GPRS and Non-GPRS service not allowed	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 3G service. Triggers: - On getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS and Non-GPRS service not allowed	Description: Total number of Combined Inter Service RAU Rejects sent with cause “GPRS and non-GPRS service not allowed for subscriber” against Inter-service-RAU Requests in 2G service. Triggers: - On getting “IMSI unknown” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-MSId not derived by Nw	Description: Total number of Combined Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against Inter-Service-RAU Requests in 3G service. Triggers: • On getting periodic RAU with old RAI as a non-local RAI • When PTMSI-IE is missing in RAU • When old RAI has invalid location area values (0x0000 or 0xffff) for PTMSI-attaches/RAUs • When getting a RAU with old RAI in 2G and PTMSI is unknown • When getting PTMSI-SIG-MISMATCH for a SGSN Context Request sent with IMSI Validated • When getting a RAU Request while an attach with the same peer-SGSN-PTMSI is in progress • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSId not derived by Nw	Description: Total number of Combined Inter Service RAU Request Rejects sent with cause “MSID not derived by network” against Inter-Service-RAU Requests in 2G service. Triggers: • When SGSN-Context-Resp arrives with any cause other than “accepted” • When GMM-Identity-Req with MS fails • When GTP-Identity-Req with MS fails • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Implicitly Detached	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Implicitly detached”. Triggers: • RAU at 3G when subscriber was detached from 2G • When we get a different IMSI in SGSN Context Response for an SGSN Context Request sent with IMSI validated • When we get RAU while awaiting a Detach Accept • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Implicitly Detached	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Implicitly detached”. Triggers: • When we get an RAU from an unknown MS • On T3350 expiry for the attach-accept • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-PLMN not allowed	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-PLMN not allowed	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “PLMN not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Location Area not allowed	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Location Area not allowed	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Location area not allowed”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Roaming not allowed in this Location Area	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Roaming area not allowed in the given location area”. Triggers: • When rejecting as a shared SGSN due to no operator accepting the given IMSI • When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Roaming not allowed in this Location Area	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Roaming area not allowed in the given location area”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service

Field	Description
3G-GPRS service not allowed in this PLMN	Description: Total number of Combined RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against Inter-Service-RAU Requests in 3G service. Triggers: - On getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-GPRS service not allowed in this PLMN	Description: Total number of Combined RAU Rejects sent with cause “GPRS service not allowed in this PLMN” against Inter-Service-RAU Requests in 2G service. Triggers: - On getting “Roaming not allowed” from HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-No suitable cells in this Location Area	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “No cells in location area”. Triggers: - On getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-No suitable cells in this Location Area	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “No cells in location area”. Triggers: - On getting “UMTS access control” from Siemens HLR for SAI-Req/GLU-Req - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MSC not reachable	Description: Total number of Combined Inter Service RAU rejects in 3G service with cause “MSC not reachable”. Triggers: - On sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service

Field	Description
2G-MSC not reachable	Description: Total number of Combined Inter Service RAU rejects in 2G service with cause “MSC not reachable”. Triggers: - On sending an attach/RAU Accept with cause “GPRS only attached” or “RA updated” for a combined CS/PS request either because: - the request is timed out - inability to send to VLR - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Network Failure	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Network Failure”. Triggers: - RNC is overloaded - Not enough credits at session manager - On getting cause “data missing from HLR” in SAI-Req/GLU-Req - Too many IUs for the same IMSI - On getting a RAU with a peer SGSN PTMSI when another Attach is ongoing with the same PTMSI - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Network Failure	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Network Failure”. Triggers: - On getting cause “data missing from HLR” in SAI-Req/GLU-Req - On XID failure for RAU - Inability to send an SGSN-Ctx-Req out for an RAU - Inability to send a Check-IMEI Request out - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MAC Failure	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service

Field	Description
2G-MAC Failure	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Message Authenticate Code (MAC) Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-SYNC Failure	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-SYNC Failure	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Context Synchronization Failure”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Congestion	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Network Congestion”. Triggers: - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Congestion	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Network Congestion”. Triggers: - On congestion, if configured for attach-throttling - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-GSM Auth Unacceptable	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-GSM Auth Unacceptable	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “GSM Authentication unacceptable”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-No PDP contexts activated	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service

Field	Description
2G-No PDP contexts activated	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “PDP context not activated”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Retry from new cell	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Retry from new cell	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Subscriber retried from a new cell”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Semantically Wrong Msg	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Semantically wrong message”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Semantically Wrong Msg	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Semantically wrong message”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Invalid Mandatory Info	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Invalid Mandatory Info”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Invalid Mandatory Info	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Invalid Mandatory Info”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-MSG type Non Existent	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Message type does not exist”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSG type Non Existent	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Message type does not exist”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-MSG type not compatible with protocol state	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Message type not compatible with protocol state”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-MSG type not compatible with protocol state	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Message type not compatible with protocol state”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-IE Non Existent	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “Information element not existent”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-IE Non Existent	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “Information element not existent”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service

Field	Description
3G-Conditional IE Error	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “error in conditional informationalelement”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Conditional IE Error	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “error in conditional informationalelement”. Triggers: - On decode failure of messages - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Message not compatible with protocol state	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “message not compatible with protocol state”. Triggers: - When getting an Attach Request before getting Relocation-complete during SRNS - When getting periodic RAU in a direct transfer message - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per RNC, per SGSN service
2G-Message not compatible with protocol state	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause “message not compatible with protocol state”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per GPRS service
3G-Protocol Error	Description: Total number of Combined Inter Service RAU rejects in 3G service with cause “protocol error”. Triggers: Increments when operator policy is configured with this value as the reject cause for attaches/RAUs. Availability: per RA, per RNC, per SGSN service
2G-Protocol Error	Description: Total number of Combined Inter Service RAU rejects in 2G service with cause “protocol error”. Triggers: - When the PLMN ID in BSSGP message does not match the configured PLMN at GPRS service - When operator policy is configured with this value as the reject cause for attaches/RAUs Availability: per RA, per GPRS service
3G-Unknown cause	Description: Total number of Combined Inter Service RAU Rejects in 3G service with cause “unknown error”. Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Unknown cause	Description: Total number of Combined Inter Service RAU Rejects in 2G service with cause "unknown error". Availability: per RA, per GPRS service
Routing Area Update Failure	This group displays the statistics of total RAU failures on SGSN.
Total-RAU-Failure	This subgroup indicates all type of Routing Area Update message failures including 2G and 3G occurred on SGSN.
Total-Intra-RAU-Failure	Total all type of intra-routing area RAU failures including 2G and 3G occurred on SGSN.
Total-Ra-Up-Intra-RAU-Fail	Total intra-routing area RAU failures including 2G and 3G occurred on SGSN.
3G-Ra-Up-Intra-RAU-Failure	Total intra-routing area RAU failures occurred on SGSN for 3G service.
2G-Ra-Up-Intra-RAU-Failure	Total intra-routing area RAU failures occurred on SGSN for 2G service.
Total-Periodic-RAU-Failure	Total periodic RAU failures including 2G and 3G occurred on SGSN.
3G-Periodic-RAU-Failure	Total periodic RAU failures occurred on SGSN for 3G service.
2G-Periodic-RAU-Failure	Total periodic RAU failures occurred on SGSN for 2G service.
Total-Comb-Intra-RAU-Fail	Total combined (PS and CS) RAU failures including 2G and 3G occurred on SGSN.
3G-Comb-Intra-RAU-Failure	Total combined (PS and CS) RAU failures occurred on SGSN for 3G service.
2G-Comb-Intra-RAU-Failure	Total combined (PS and CS) RAU failures occurred on SGSN for 2G service.
Total-Inter-SGSN-RAU-Fail	Total all type of inter-SGSN RAU failures including 2G and 3G occurred on SGSN.
Total-PS-Inter-RAU-Failure	Total inter-SGSN RAU failures including 2G and 3G occurred on SGSN for PS-only service.
3G-PS-Inter-RAU-Failure	Total inter-SGSN RAU failures for 3G occurred on SGSN for PS-only service.
2G-PS-Inter-RAU-Failure	Total inter-SGSN RAU failures for 2G occurred on SGSN for PS-only service.
Total-Comb-Inter-RAU-Fail	Total inter-SGSN RAU failures including 2G and 3G occurred on SGSN for combined (PS and CS) service.
3G-Comb-Inter-RAU-Failure	Total inter-SGSN RAU failures for 3G occurred on SGSN for combined (PS and CS) service.
2G-Comb-Inter-RAU-Failure	Total inter-SGSN RAU failures for 2G occurred on SGSN for combined (PS and CS) service.
Total-Ps-Inter-Rat-RAU-Fail	Total PS-only inter-RAT RAU failures including 2G and 3G services occurred on SGSN.
3G-Ps-Inter-Rat-RAU-Fail	Total PS-only inter-RAT RAU failures for 3G service occurred on SGSN.
2G-Ps-Inter-Rat-Fail	Total PS-only inter-RAT RAU failures for 2G service occurred on SGSN.
Total-Comb-Inter-Rat-RAU-Fai	Total combined (PS and CS) inter-RAT RAU failures including 2G and 3G services occurred on SGSN.
3G-Comb-Inter-Rat-RAU-Fail	Total combined (PS and CS) inter-RAT RAU failures for 3G service occurred on SGSN.
2G-Comb-Inter-Rat-Fail	Total combined (PS and CS) inter-RAT RAU failures for 2G service occurred on SGSN.
Total-Ps-Inter-Serv-RAU-Fail	Total PS-only inter-service RAU failures including 2G and 3G services occurred on SGSN.
3G-Ps-Inter-Serv-RAU-Fail	Total PS-only inter-service RAU failures for 3G service occurred on SGSN.
2G-Ps-Inter-Serv-RAU-Fail	Total PS-only inter-service RAU failures for 2G service occurred on SGSN.

Field	Description
Total-Comb-Inter-Ser-RAU-Fai	Total combined (PS and CS) inter-service RAU failures including 2G and 3G services occurred on SGSN.
3G-Comb-Inter-Ser-RAU-Fai	Total combined (PS and CS) inter-service RAU failures for 3G service occurred on SGSN.
2G-Comb-Inter-Ser-RAU-Fai	Total combined (PS and CS) inter-service RAU failures for 2G service occurred on SGSN.
Intra Ra-Upd Routing Area Update Failure Causes	This group displays the failure causes for intra-routing area RAU request failures on SGSN.
3G-Iu release before RAU over	Total number of intra-routing area RAU request failures occurred due to 3G Iu released before RAU procedure was over.
3G-Failure due to Other Ongoing Procedure	Total number of intra-routing area RAU request failures occurred as another procedure was ongoing in 3G service.
2G-Failure due to Other Ongoing Procedure	Total number of intra-routing area RAU request failures occurred as another procedure was ongoing in 2G service.
Intra Periodic Routing Area Update Failure Causes	This group displays the failure causes for periodic area RAU request failures on SGSN.
3G-Iu release before RAU over	Total number of periodic RAU request failures occurred due to 3G Iu released before RAU procedure was over.
3G-Failure due to Other Ongoing Procedure	Total number of periodic RAU request failures occurred as another procedure was ongoing in 3G service.
2G-Failure due to Other Ongoing Procedure	Total number of periodic RAU request failures occurred as another procedure was ongoing in 2G service.
Intra Combo. Routing Area Update Failure Causes	This group displays the failure causes for combined (PS and CS) RAU request failures on SGSN.
3G-Iu release before RAU over	Total number of combined (PS and CS) RAU request failures occurred due to 3G Iu released before RAU procedure was over.
3G-Failure due to Other Ongoing Procedure	Total number of combined (PS and CS) RAU request failures occurred as another procedure was ongoing in 3G service.
2G-Failure due to Other Ongoing Procedure	Total number of combined (PS and CS) RAU request failures occurred as another procedure was ongoing in 2G service.
Inter SGSN PS Only Routing Area Update Failure Causes	This group displays the failure causes for PS-only RAU request failures on SGSN.
3G-Iu release before RAU over	Total number of PS-only RAU request failures occurred due to 3G Iu released before RAU procedure was over.
3G-Failure due to Other Ongoing Procedure	Total number of PS-only RAU request failures occurred as another procedure was ongoing in 3G service.
2G-Failure due to Other Ongoing Procedure	Total number of PS-only RAU request failures occurred as another procedure was ongoing in 2G service.
Inter SGSN Comb. Routing Area Update Failure Causes	This group displays the failure causes for inter-SGSN combined (PS and CS) RAU request failures on SGSN.
3G-Iu release before RAU over	Total number of inter-SGSN combined (PS and CS) RAU request failures occurred due to 3G Iu released before RAU procedure was over.

Field	Description
3G-Failure due to Other Ongoing Procedure	Total number of inter-SGSN combined (PS and CS) RAU request failures occurred as another procedure was ongoing in 3G service.
2G-Failure due to Other Ongoing Procedure	Total number of inter-SGSN combined (PS and CS) RAU request failures occurred as another procedure was ongoing in 2G service.
Detach Request	Indicates the statistics of detach request messages.
Total-Detach-Req	Total number of detach request messages.
Total-MS-Init-Detach-Req	Total number of MS initiated detach request.
3G-MS-Init-GPRS-Detach-Req	Total number of MS initiated GPRS (PS) detach request for 3G service.
2G-MS-Init-GPRS-Detach-Req	Total number of MS initiated GPRS detach request for 2G service.
3G-MS-Init-IMSI-Detach-Req	Total number of MS initiated IMSI (CS) detach request for 3G service.
2G-MS-Init-IMSI-Detach-Req	Total number of MS initiated IMSI detach request for 2G service.
3G-MS-Init-Comb-Detach-Req	Total number of MS initiated combined (IMSI and GPRS) detach request for 3G service.
2G-MS-Init-Comb-Detach-Req	Total number of MS initiated combined (PS and CS) detach request for 2G service.
Total-Nw-Init-Detach-Req	Total number of network initiated detach request.
3G-Nw-Init-Reattach-Req	Description: During the network initiated detach for 3G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach required" when it wants the MS to attach again for GPRS services. Triggers: Increments when a clear subscriber is performed. Availability: per RA, per RNC, per SGSN service
2G-Nw-Init-Reattach-Req	Description: During the network initiated detach for 2G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach required" when it wants the MS to attach again for GPRS services. Triggers: Increments when a clear subscriber is performed. Availability: per RA, per RNC, per GPRS service
3G-Nw-Init-Reattach-Not-Req	Description: During the network initiated detach for 3G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach not required" when it does not expect the MS to attach again for GPRS services. Triggers: Increments upon reception of a Cancel-Location (subscription-withdrawn) or a DSD (all-gprs-subscription withdrawn). Availability: per RA, per RNC, per SGSN service
2G-Nw-Init-Reattach-Not-Req	Description: During the network initiated detach for 2G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach not required" when it does not expect the MS to attach again for GPRS services. Triggers: Increments upon reception of a Cancel-Location (subscription-withdrawn) or a DSD (all-gprs-subscription withdrawn). Availability: per RA, per RNC, per GPRS service
3G-Nw-Init-IMSI-Detach	Description: When the SGSN loses the GS-context for the MS due to a VLR-reset indication, it notifies the MS by sending an IMSI-detach on the next signalling activity by the MS. Triggers: Increments upon VLR-reset indication and a next uplink activity from MS. Availability: per RA, per RNC, per SGSN service

Field	Description
2G-Nw-Init-IMSI-Detach	Description: When the SGSN loses the GS-context for the MS due to a VLR-reset indication, it notifies the MS by sending an IMSI-detach on the next signalling activity by the MS. Triggers: Increments upon VLR-reset indication and a next uplink activity from MS. Availability: per RA, per RNC, per GPRS service
Retransmission	Indicates the statistics of detach request messages retransmitted.
Ret-Total-Detach-Req	Total number of detach request messages retransmitted.
Ret-Total-MS-Init-Det-Req	Total number of MS initiated detach request messages retransmitted.
Ret-3G-MS-Init-GPRS-Det-Re	Total number of MS initiated GPRS (PS) detach request messages retransmitted for 3G service.
Ret-3G-MS-Init-IMSI-Det-Re	Total number of MS initiated IMSI (CS) detach request messages retransmitted for 3G service.
Ret-3G-MS-Init-Comb-Det-Re	Total number of MS initiated combined (IMSI and GPRS) detach request messages retransmitted for 3G service.
Ret-2G-MS-Init-GPRS-Det-Re	Total number of MS initiated GPRS detach request messages retransmitted for 2G service.
Ret-2G-MS-Init-IMSI-Det-Re	Total number of MS initiated IMSI detach request messages retransmitted for 2G service.
Ret-2G-MS-Init-Comb-Det-Re	Total number of MS initiated combined (PS and CS) detach request messages retransmitted for 2G service.
Ret-Total-Nw-Init-Det-Req	Total number of network initiated detach request messages retransmitted.
Ret-3G-Nw-Init-Reattach-Req	Description: During the network initiated detach for 3G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach required" when it wants the MS to attach again for GPRS services. Triggers: Increments upon the 1st, 2nd, 3rd and 4th expiry of T3322 for a detach of type "Reattach Required". Availability: per RA, per RNC, per SGSN service
Ret-2G-Nw-Init-Reattach-Req	Description: During the network initiated detach for 2G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach required" when it wants the MS to attach again for GPRS services. Triggers: Increments upon the 1st, 2nd, 3rd and 4th expiry of T3322 for a detach of type "Reattach Required". Availability: per RA, per RNC, per GPRS service
Ret-3G-Nw-Init-Reattach-Not	Description: During the network initiated detach for 3G service, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach not required" when it does not expect the MS to attach again for GPRS services. Triggers: Increments upon the 1st, 2nd, 3rd and 4th expiry of T3322 for a detach of type "Reattach Not Required". Availability: per RA, per RNC, per SGSN service
Ret-2G-Nw-Init-Reattach-Not	Description: During the network initiated detach, the SGSN informs the MS that it has been detached by sending a detach request. The Detach Request has a detach type - "Reattach not required" when it does not expect the MS to attach again for GPRS services. Triggers: Increments upon the 1st, 2nd, 3rd and 4th expiry of T3322 for a detach of type "Reattach Not Required". Availability: per RA, per RNC, per GPRS service

Field	Description
Ret-3G-Nw-Init-IMSI-Detach	Description: When the SGSN loses the GS-context for the MS due to a VLR-reset indication, it notifies the MS by sending an IMSI-detach on the next signalling activity by the MS in a 3G service. Triggers: Increments upon the 1st, 2nd, 3rd and 4th expiry of T3322 for a detach of type “IMSI Detach”. Availability: per RA, per RNC, per SGSN service
Ret-2G-Nw-Init-IMSI-Detach	Description: When the SGSN loses the GS-context for the MS due to a VLR-reset indication, it notifies the MS by sending an IMSI-detach on the next signalling activity by the MS in a 2G service. Triggers: Increments upon the 1st, 2nd, 3rd and 4th expiry of T3322 for a detach of type “IMSI Detach”. Availability: per RA, per RNC, per GPRS service
Detach Accept	Indicates the statistics of detach request accept messages.
Total-Detach-Acc	Total number of detach request accept messages.
Total-MS-Init-Detach-Acc	Total number of MS initiated detach request accepted.
3G-MS-Init-Detach-Acc	Total number of MS initiated GPRS detach request accepted for 3G service.
2G-MS-Init-Detach-Acc	Total number of MS initiated IMSI detach request accepted for 2G service.
Total-Nw-Init-Detach-Acc	Total number of network initiated detach request accepted.
3G-Nw-Init-Detach-Acc	Total number of network initiated detach request for 3G service.
2G-Nw-Init-Detach-Acc	Total number of network initiated detach request for 2G service.
3G-Nw-Init-GPRS-Detach-Acc	Total number of network initiated GPRS (PS) detach request accepted for 3G service.
2G-Nw-Init-GPRS-Detach-Acc	Total number of network initiated GPRS (PS) detach request accepted for 2G service.
3G-Nw-Init-IMSI-Detach-Acc	Total number of network initiated IMSI (CS) detach request accepted for 3G service.
2G-Nw-Init-IMSI-Detach-Acc	Total number of network initiated IMSI (CS) detach request accepted for 2G service.
3G-Nw-Init-Comb-Detach-Acc	Total number of network initiated combined (PS and CS) detach request accepted for 3G service.
2G-Nw-Init-Comb-Detach-Acc	Total number of network initiated combined (PS and CS) detach request accepted for 2G service.
Service Request	Indicates the statistics of service request messages.
Total-Serv-Req	Indicates the statistics of total service request messages.
Total-Signalling-Serv-Req	Total signalling service requests messages.
3G-Signalling-Serv-Req	Total signalling service requests messages for 3G service.
2G-Signalling-Serv-Req	Total signalling service requests messages for 2G service.
Total-Page-Rsp-Serv-Req	Total paging response for service requests messages.
3G-Page-Rsp-Serv-Req	Total paging response for service requests messages for 3G service.

Field	Description
2G-Page-Rsp-Serv-Req	Total paging response for service requests messages for 2G service.
Total-Data-Serv-Req	Total data service requests messages.
3G-Data-Serv-Req	Total data service requests messages for 3G service.
2G-Data-Serv-Req	Total data service requests messages for 2G service.
Retransmission	Indicates the statistics of service request messages retransmitted.
Ret-Total-Serv-Req	Indicates the statistics of total service request messages retransmitted.
Ret-Total-Sig-Serv-Req	Total signalling service requests messages retransmitted.
Ret-3G-Sig-Serv-Req	Total signalling service requests messages retransmitted for 3G service.
Ret-2G-Signalling-Serv-Req	Total signalling service requests messages retransmitted for 2G service.
Ret-Total-PageRsp-Serv-Req	Total paging response for service requests messages retransmitted.
Ret-3G-PageRsp-Serv-Req	Total paging response for service requests messages retransmitted for 3G service.
Ret-2G-Page-Rsp-Serv-Req	Total paging response for service requests messages retransmitted for 2G service.
Ret-Total-Data-Serv-Req	Total data service requests messages retransmitted.
Ret-3G-Data-Serv-Req	Total data service requests messages retransmitted for 3G service.
Ret-2G-Data-Serv-Req	Total data service requests messages retransmitted for 2G service.
Service Accept	Indicates the statistics of service request messages.
Total-Serv-Resp	Total service response messages.
3G-Service-Resp	Total service response messages for 3G service.
2G-Service-Resp	Total service response messages for 2G service.
Service Reject	Total paging response for service requests messages.
Total-Serv-Rej	Total service reject messages.
3G-Service-Rej	Total service reject messages for 3G service.
2G-Service-Rej	Total service reject messages for 2G service.
Service Reject Causes	Indicates the statistics of causes for service request reject for 2G and 3G service.
3G-Network Failure	Total number of service request rejected for 3G service due to network failure.
2G-Network Failure	Total number of service request rejected for 2G service due to network failure.
3G-IMSI Unknown in HLR	Total number of service request rejected for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of service request rejected for 2G service due to unknown IMSI in HLR.
3G-MsId can not derived by Nw	Total number of service request rejected for 3G service as MSID can not derived by network from message.
2G-MsId can not derived by Nw	Total number of service request rejected for 3G service as MSID can not derived by network from message.
3G-Implicitly detached	Total number of service request rejected for 3G service due to implicitly detach.

Field	Description
2G-Implicitly detached	Total number of service request rejected for 2G service due to implicitly detach.
3G-Illegal MS	Total number of service request rejected for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of service request rejected for 2G service due to illegal mobile subscriber.
3G-Message not compatible with protocol state	Total number of service request rejected for 3G service as message is not compatible with protocol state.
2G-Message not compatible with protocol state	Total number of service request rejected for 2G service as message is not compatible with protocol state.
3G-No PDP contexts activated	Total number of service request rejected for 3G service as no PDP context is activated.
2G-No PDP contexts activated	Total number of service request rejected for 2G service as no PDP context is activated.
3G-Semantically Wrong Msg	Total number of service request rejected for 3G service as request message is semantically wrong.
2G-Semantically Wrong Msg	Total number of service request rejected for 2G service as request message is semantically wrong.
3G-Unknown cause	Total number of service request rejected for 3G service due to unknown cause or reason not specified here.
2G-Unknown cause	Total number of service request rejected for 2G service due to unknown cause or reason not specified here.
Paging Initiated	Indicates the statistics of paging initiated procedure.
Total-Page-Requests	Total paging request messages.
3G-PS-Page-Requests	Total paging request messages in packet switching (PS) domain for 3G service.
3G-CS-Page-Requests	Total paging request messages in circuit switching (CS) domain for 3G service.
2G-PS-Page-Requests	Total paging request messages in packet switching (PS) domain for 2G service.
2G-CS-Page-Requests	Total paging request messages in circuit switching (CS) domain for 2G service.
Total-Page-Responses	Total paging request response messages.
3G-PS-Page-Responses	Total paging request response messages in packet switching (PS) domain for 3G service.
3G-CS-Page-Responses	Total paging request response messages in circuit switching (CS) domain for 3G service.
2G-PS-Page-Responses	Total paging request response messages in packet switching (PS) domain for 2G service.
2G-CS-Page-Responses	Total paging request response messages in circuit switching (CS) domain for 2G service.
Retransmission	Indicates the statistics of paging initiated procedure retransmitted.
Ret-Total-Page-Requests	Total paging request messages.
Ret-3G-Page-Requests	Total paging request messages retransmitted in for 3G service.
Ret-2G-Page-Requests	Total paging request messages retransmitted in for 2G service.
Gmm Status Message	Indicates the statistics of GPRS mobility management procedure status messages.
Total-Gmm-Status-Sent	Total GPRS mobility management procedure status messages sent.

Field	Description
3G-Gmm-Status-Sent	Total GPRS mobility management procedure status messages sent for 3G service.
2G-Gmm-Status-Sent	Total GPRS mobility management procedure status messages sent for 2G service.
Total-Gmm-Status-Rcvd	Total GPRS mobility management procedure status messages received.
3G-Gmm-Status-Rcvd	Total GPRS mobility management procedure status messages received for 3G service.
2G-Gmm-Status-Rcvd	Total GPRS mobility management procedure status messages received for 2G service.
GMM Status Sent Causes	Indicates the statistics of causes for GPRS mobility management status messages sent for 2G and 3G service.
3G-IMSI Unknown in HLR	Total number of GMM status messages sent for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of GMM status messages sent for 2G service due to unknown IMSI in HLR.
3G-Illegal MS	Total number of GMM status messages sent for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of GMM status messages sent for 2G service due to illegal mobile subscriber.
3G-Illegal ME	Total number of GMM status messages sent for 3G service due to illegal mobile equipment.
2G-Illegal ME	Total number of GMM status messages sent for 2G service due to illegal mobile equipment.
3G-GPRS service not allowed	Total number of GMM status messages sent for 3G service due to GPRS service not allowed for subscriber.
2G-GPRS service not allowed	Total number of GMM status messages sent for 2G service due to GPRS service not allowed for subscriber.
3G-GPRS & Non-GPRS services not allowed	Total number of GMM status messages sent for 3G service due to GPRS and non-GPRS service not allowed for subscriber.
2G-GPRS & Non-GPRS services not allowed	Total number of GMM status messages sent for 2G service due to GPRS and non-GPRS service not allowed for subscriber.
3G-MsId not derived by Nw	Total number of GMM status messages sent for 3G service due to network failed to derive MSID from attach message.
2G-MsId not derived by Nw	Total number of GMM status messages sent for 2G service due to network failed to derive MSID from attach message.
3G-Implicitly detached	Total number of GMM status messages sent for 3G service due to implicitly detach.
2G-Implicitly detached	Total number of GMM status messages sent for 2G service due to implicitly detach.
3G-PLMN not allowed	Total number of GMM status messages sent for 3G service due to specific PLMN not allowed.
2G-PLMN not allowed	Total number of GMM status messages sent for 2G service due to specific PLMN not allowed.
3G-Location Area not allowed	Total number of GMM status messages sent for 3G service due to specific location area not allowed.
2G-Location Area not allowed	Total number of GMM status messages sent for 2G service due to specific location area not allowed.
3G-Roaming not allowed in this Location Area	Total number of GMM status messages sent for 3G service due to roaming not allowed in specific location area.

Field	Description
2G-Roaming not allowed in this Location Area	Total number of GMM status messages sent for 2G service due to roaming not allowed in specific location area.
3G-GPRS service not allowed in this PLMN	Total number of GMM status messages sent for 3G service due to GPRS service not allowed in specific PLMN.
2G-GPRS service not allowed in this PLMN	Total number of GMM status messages sent for 2G service due to GPRS service not allowed in specific PLMN.
3G-No suitable cells in this Location Area	Total number of GMM status messages sent for 3G service due to non availability of suitable cell in specific location area.
2G-No suitable cells in this Location Area	Total number of GMM status messages sent for 2G service due to non availability of suitable cell in specific location area.
3G-MSC not reachable	Total number of GMM status messages sent for 3G service as MSC not reachable.
2G-MSC not reachable	Total number of GMM status messages sent for 2G service as MSC not reachable.
3G-Network Failure	Total number of GMM status messages sent for 3G service due to network failure.
2G-Network Failure	Total number of GMM status messages sent for 2G service due to network failure.
3G-MAC Failure	Total number of GMM status messages sent for 3G service due to message authenticate code (MAC) failure.
2G-MAC Failure	Total number of GMM status messages sent for 2G service due to MAC failure.
3G-SYNC Failure	Total number of GMM status messages sent for 3G service due to context synchronization failure.
2G-SYNC Failure	Total number of GMM status messages sent for 2G service due to context synchronization failure.
3G-Congestion	Total number of GMM status messages sent for 3G service due to network congestion.
2G-Congestion	Total number of GMM status messages sent for 2G service due to network congestion.
3G-GSM Auth Unacceptable	Total number of GMM status messages sent for 3G service due to unacceptable authentication from GSM network.
2G-GSM Auth Unacceptable	Total number of GMM status messages sent for 2G service due to unacceptable authentication from GSM network.
3G-No PDP contexts activated	Total number of GMM status messages sent for 3G service as PDP context is not activated.
2G-No PDP contexts activated	Total number of GMM status messages sent for 2G service as PDP context is not activated.
3G-Semantically Wrong Msg	Total number of GMM status messages sent for 3G service as attach request message is semantically wrong.
2G-Semantically Wrg Msg	Total number of GMM status messages sent for 2G service as attach request message is semantically wrong.
3G-Invalid Mandatory Info	Total number of GMM status messages sent for 3G service as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of GMM status messages sent for 2G service as mandatory information in message is invalid.
3G-MSG type Non Existent	Total number of GMM status messages sent for 3G service due to non-existent type of message.

Field	Description
2G-MSG type Non Existent	Total number of GMM status messages sent for 2G service due to non-existent type of message.
3G-MSG type not compatible with protocol state	Total number of GMM status messages sent for 3G service as message type is not compatible with protocol state.
2G-MSG type not compatible with protocol state	Total number of GMM status messages sent for 2G service as message type is not compatible with protocol state.
3G-Conditional IE Error	Total number of GMM status messages sent for 3G service due to error in conditional information element.
2G-conditional IE Error	Total number of GMM status messages sent for 2G service due to error in conditional information element.
3G-Message not compatible with protocol state	Total number of GMM status messages sent for 3G service as message is not compatible with protocol state.
2G-Message not compatible with protocol state	Total number of GMM status messages sent for 2G service as message is not compatible with protocol state.
3G-protocol Error	Total number of GMM status messages sent for 3G service due to protocol error in message.
2G-protocol Error	Total number of GMM status messages sent for 2G service due to protocol error in message.
GMM Status Rcvd Causes	Indicates the statistics of causes for GPRS mobility management status messages received for 2G and 3G service.
3G-IMSI Unknown in HLR	Total number of GMM status messages received for 3G service due to unknown IMSI in HLR.
2G-IMSI Unknown in HLR	Total number of GMM status messages received for 2G service due to unknown IMSI in HLR.
3G-Illegal MS	Total number of GMM status messages received for 3G service due to illegal mobile subscriber.
2G-Illegal MS	Total number of GMM status messages received for 2G service due to illegal mobile subscriber.
3G-Illegal ME	Total number of GMM status messages received for 3G service due to illegal mobile equipment.
2G-Illegal ME	Total number of GMM status messages received for 2G service due to illegal mobile equipment.
3G-GPRS service not allowed	Total number of GMM status messages received for 3G service due to GPRS service not allowed for subscriber.
2G-GPRS service not allowed	Total number of GMM status messages received for 2G service due to GPRS service not allowed for subscriber.
3G-GPRS & Non-GPRS services not allowed	Total number of GMM status messages received for 3G service due to GPRS and non-GPRS service not allowed for subscriber.
2G-GPRS & Non-GPRS services not allowed	Total number of GMM status messages received for 2G service due to GPRS and non-GPRS service not allowed for subscriber.
3G-MsId not derived by Nw	Total number of GMM status messages received for 3G service due to network failed to derive MSID from attach message.
2G-MsId not derived by Nw	Total number of GMM status messages received for 2G service due to network failed to derive MSID from attach message.
3G-Implicitly detached	Total number of GMM status messages received for 3G service due to implicitly detach.
2G-Implicitly detached	Total number of GMM status messages received for 2G service due to implicitly detach.

Field	Description
3G-PLMN not allowed	Total number of GMM status messages received for 3G service due to specific PLMN not allowed.
2G-PLMN not allowed	Total number of GMM status messages received for 2G service due to specific PLMN not allowed.
3G-Location Area not allowed	Total number of GMM status messages received for 3G service due to specific location area not allowed.
2G-Location Area not allowed	Total number of GMM status messages received for 2G service due to specific location area not allowed.
3G-Roaming not allowed in this Location Area	Total number of GMM status messages received for 3G service due to roaming not allowed in specific location area.
2G-Roaming not allowed in this Location Area	Total number of GMM status messages received for 2G service due to roaming not allowed in specific location area.
3G-GPRS service not allowed in this PLMN	Total number of GMM status messages received for 3G service due to GPRS service not allowed in specific PLMN.
2G-GPRS service not allowed in this PLMN	Total number of GMM status messages received for 2G service due to GPRS service not allowed in specific PLMN.
3G-No suitable cells in this Location Area	Total number of GMM status messages received for 3G service due to non availability of suitable cell in specific location area.
2G-No suitable cells in this Location Area	Total number of GMM status messages received for 2G service due to non availability of suitable cell in specific location area.
3G-MSC not reachable	Total number of GMM status messages received for 3G service as MSC not reachable.
2G-MSC not reachable	Total number of GMM status messages received for 2G service as MSC not reachable.
3G-Network Failure	Total number of GMM status messages received for 3G service due to network failure.
2G-Network Failure	Total number of GMM status messages received for 2G service due to network failure.
3G-MAC Failure	Total number of GMM status messages received for 3G service due to message authenticate code (MAC) failure.
2G-MAC Failure	Total number of GMM status messages received for 2G service due to MAC failure.
3G-SYNC Failure	Total number of GMM status messages received for 3G service due to context synchronization failure.
2G-SYNC Failure	Total number of GMM status messages received for 2G service due to context synchronization failure.
3G-Congestion	Total number of GMM status messages received for 3G service due to network congestion.
2G-Congestion	Total number of GMM status messages received for 2G service due to network congestion.
3G-GSM Auth Unacceptable	Total number of GMM status messages received for 3G service due to unacceptable authentication from GSM network.
2G-GSM Auth Unacceptable	Total number of GMM status messages received for 2G service due to unacceptable authentication from GSM network.
3G-No PDP contexts activated	Total number of GMM status messages received for 3G service as PDP context is not activated.

Field	Description
2G-No PDP contexts activated	Total number of GMM status messages received for 2G service as PDP context is not activated.
3G-Semantically Wrong Msg	Total number of GMM status messages received for 3G service as attach request message is semantically wrong.
2G-Semantically Wrong Msg	Total number of GMM status messages received for 2G service as attach request message is semantically wrong.
3G-Invalid Mandatory Info	Total number of GMM status messages received for 3G service as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of GMM status messages received for 2G service as mandatory information in message is invalid.
3G-MSG type Non Existent	Total number of GMM status messages received for 3G service due to non-existent type of message.
2G-MSG type Non Existent	Total number of GMM status messages received for 2G service due to non-existent type of message.
3G-MSG type not compatible with protocol state	Total number of GMM status messages received for 3G service as message type is not compatible with protocol state.
2G-MSG type not compatible with protocol state	Total number of GMM status messages received for 2G service as message type is not compatible with protocol state.
3G-Conditional IE Error	Total number of GMM status messages received for 3G service due to error in conditional information element.
2G-conditional IE Error	Total number of GMM status messages received for 2G service due to error in conditional information element.
3G-Message not compatible with protocol state	Total number of GMM status messages received for 3G service as message is not compatible with protocol state.
2G-Message not compatible with protocol state	Total number of GMM status messages received for 2G service as message is not compatible with protocol state.
3G-protocol Error	Total number of GMM status messages received for 3G service due to protocol error in message.
2G-protocol Error	Total number of GMM status messages received for 2G service due to protocol error in message.
Gmm Information Sent	Indicates the statistics of messages sent with GPRS mobility management information.
Total-Gmm-Information-Sent	Total messages sent with GPRS mobility management information.
3G-Gmm-Information-Sent	Total messages sent with GPRS mobility management information for 3G service.
2G-Gmm-Information-Sent	Total messages sent with GPRS mobility management information for 2G service.
Inter-System Procedures	This group displays the statistics of inter-system procedures.
3G-Ra-Up-RAU	Total numbers of RAU messages (Accept+Reject) sent for 3G routing area update procedure.
2G-Ra-Up-RAU	Total numbers of RAU messages (Accept+Reject) sent for 2G routing area update procedure.
3G-Comb-RAU	Total numbers of combined (PS and CS) RAU messages (Accept+Reject) sent for 3G routing area update procedure.

Field	Description
2G-Comb-RAU	Total numbers of combined (PS and CS) RAU messages (Accept+Reject) sent for 2G routing area update procedure.
3G-Ra-Up-RAU-Rej	Total numbers of RAU Reject messages sent for 3G routing area update procedure.
2G-Ra-Up-RAU-Rej	Total numbers of RAU Reject messages sent for 2G routing area update procedure.
3G-Comb-RAU-Rej	Total numbers of combined (PS and CS) RAU Reject messages sent for 3G routing area update procedure.
2G-Comb-RAU-Rej	Total numbers of combined (PS and CS) RAU Reject messages sent for 2G routing area update procedure.
3G-Ra-Up-RAU-Acc	Total numbers of RAU Accept messages sent for 3G routing area update procedure.
2G-Ra-Up-RAU-Acc	Total numbers of RAU Accept messages sent for 2G routing area update procedure.
3G-Comb-RAU-Acc	Total numbers of combined (PS and CS) RAU Accept messages sent for 3G routing area update procedure.
2G-Comb-RAU-Acc	Total numbers of combined (PS and CS) RAU Accept messages sent for 2G routing area update procedure.
3G-Attach	Total numbers of Attach messages (Accept+Reject) sent for 3G subscriber attach procedure.
2G-Attach	Total numbers of Attach messages (Accept+Reject) sent for 2G subscriber attach procedure.
3G-Comb-Attach	Total numbers of combined (PS and CS) Attach messages (Accept+Reject) sent for 3G subscriber attach procedure.
2G-Comb-Attach	Total numbers of combined (PS and CS) Attach messages (Accept+Reject) sent for 3G subscriber attach procedure.
3G-Attach-Rej	Total numbers of Attach Reject messages sent for 3G subscriber attach procedure.
2G-Attach-Rej	Total numbers of Attach Reject messages sent for 2G subscriber attach procedure.
3G-Comb-Attach-Rej	Total numbers of combined (PS and CS) Attach Reject messages sent for 3G subscriber attach procedure.
2G-Comb-Attach-Rej	Total numbers of combined (PS and CS) Attach Reject messages sent for 2G subscriber attach procedure.
3G-Attach-Acc	Total numbers of Attach Accept messages sent for 3G subscriber attach procedure.
2G-Attach-Acc	Total numbers of Attach Accept messages sent for 2G subscriber attach procedure.
3G-Comb-Attach-Acc	Total numbers of combined (PS and CS) Attach Accept messages sent for 3G subscriber attach procedure.
2G-Comb-Attach-Acc	Total numbers of combined (PS and CS) Attach Accept messages sent for 2G subscriber attach procedure.
Common Procedures	Indicates the statistics of common procedures in GPRS mobility management procedure.
Authentication And Ciphering Request	Indicates the statistics of authentication and ciphering request messages.
Total-Auth-Cipher-Req	Total authentication and ciphering request messages.
3G-Auth-Cipher-Req	Total authentication and ciphering request messages for 3G service.

Field	Description
2G-Auth-Cipher-Req	Total authentication and ciphering request messages for 2G service.
Retransmission	Indicates the statistics of authentication and ciphering request messages retransmitted.
Ret-Total-Auth-Cipher-Req	Total authentication and ciphering request messages retransmitted.
Ret-3G-Auth-Cipher-Req	Total authentication and ciphering request messages retransmitted for 3G service.
Ret-2G-Auth-Cipher-Req	Total authentication and ciphering request messages retransmitted for 2G service.
Authentication And Ciphering Response	Indicates the statistics of authentication and ciphering request response messages.
Total-Auth-Cipher-Resp	Total authentication and ciphering request response messages.
3G-Auth-Cipher-Resp	Total authentication and ciphering request response messages for 3G service.
2G-Auth-Cipher-Resp	Total authentication and ciphering request response messages for 2G service.
Authentication And Ciphering Response With SRES Mismatch	Indicates the statistics of authentication and ciphering request response messages having Signed RESponse (SRES) mismatch.
Total-Auth-Cipher-Resp with Sres Mismatch	Total authentication and ciphering request response messages having Signed RESponse (SRES) mismatch.
3G-Auth-Cipher-Resp with Sres Mismatch	Total authentication and ciphering request response messages having Signed RESponse (SRES) mismatch for 3G service.
2G-Auth-Cipher-Resp with Sres Mismatch	Total authentication and ciphering request response messages having Signed RESponse (SRES) mismatch for 2G service.
Authentication And Ciphering Reject	Indicates the statistics of authentication and ciphering request reject messages.
Total-Auth-Cipher-Rej	Total authentication and ciphering request reject messages.
3G-Auth-Cipher-Rej	Total authentication and ciphering request reject messages for 3G service.
2G-Auth-Cipher-Rej	Total authentication and ciphering request reject messages for 2G service.
Authentication And Ciphering Reject Reasons	Indicates the statistics of reasons for authentication and ciphering request rejects.
3G-XRes Mismatch	Total authentication and ciphering requests rejected for 3G service due to mismatch in expected authentication response (XRES) from subscriber.
2G-XRes Mismatch	Total authentication and ciphering requests rejected for 2G service due to mismatch in expected authentication response (XRES) from subscriber
3G-SYNC does not have AUTS	Total authentication and ciphering requests rejected for 3G service where synchronization is missing Authentication Token for Re-synchronization (AUTS).
2G-SYNC does not have AUTS	Total authentication and ciphering requests rejected for 2G service where synchronization is missing Authentication Token for Re-synchronization (AUTS).
3G-Too many SYNC Failures	Total authentication and ciphering requests rejected for 3G service due to synchronization failure beyond allowed number of time.
2G-Too many SYNC Failures	Total authentication and ciphering requests rejected for 3G service due to synchronization failure beyond allowed number of time.

Field	Description
3G-Too many MAC Failures	Total authentication and ciphering requests rejected for 3G service due to message authentication code failure beyond allowed number of time.
2G-Too many MAC Failures	Total authentication and ciphering requests rejected for 2G service due to message authentication code failure beyond allowed number of time.
3G-Gsm Auth Unacc	Total GSM authentication and ciphering requests rejected for 3G service due to unacceptable GSM network failure in procedure.
3G-Gsm Auth Unacc	Total GSM authentication and ciphering requests rejected for 2G service due to unacceptable GSM network failure in procedure.
Authentication And Ciphering Failure	Indicates the statistics of authentication and ciphering request failures.
Total-Auth-Cipher-Failure	Total authentication and ciphering request failures.
3G-Auth-Cipher-Mac-Failure	Total authentication and ciphering failures due to message authentication code (MAC) for 3G service.
2G-Auth-Cipher-Mac-Failure	Total authentication and ciphering failures due to message authentication code (MAC) for 2G service.
3G-Auth-Cipher-Sync-Failure	Total authentication and ciphering failures due to synchronisation for 3G service.
2G-Auth-Cipher-Syn-Failure	Total authentication and ciphering failures due to synchronisation for 2G service.
3G-Auth-Unacceptable	Total authentication and ciphering failures due to unacceptable delay for 3G service.
2G-Auth-Unacceptable	Total authentication and ciphering failures due to unacceptable delay for 2G service.
P-TMSI Realloc	Indicates the statistics of Packet-Temporary Mobile Subscriber Identity (P-TMSI) reallocation procedure.
Total-PTMSI Realloc	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) reallocation procedure.
3G-PTMSI Realloc	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure for 3G service.
2G-PTMSI Realloc	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure for 2G service.
Retransmission	Indicates the statistics of Packet-Temporary Mobile Subscriber Identity (P-TMSI) reallocation messages retransmitted.
Ret-Total-PTMSI Realloc	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) reallocation procedure messages retransmitted.
Ret-3G-PTMSI Realloc	Total Packet-Temporary Mobile Subscriber Identity reallocation messages retransmitted for 3G service.
Ret-2G-PTMSI Realloc	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure messages retransmitted for 2G service.
P-TMSI Realloc Complete	Indicates the statistics of Packet-Temporary Mobile Subscriber Identity reallocation procedure completed.
Total-PTMSI Realloc Complete	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure completed.
3G-PTMSI Realloc Complete	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure completed for 3G service.

Field	Description
2G-PTMSI Realloc Complete	Total Packet-Temporary Mobile Subscriber Identity reallocation procedure completed for 2G service.
Identity Request	Indicates the statistics of identity request messages.
Total-Identity-Req	Total identity request messages.
Total-IMSI-Identity-Req	Total international mobile subscriber identity (IMSI) identity request messages.
3G-IMSI-Identity-Req	Total IMSI identity request messages for 3G service.
2G-IMSI-Identity-Req	Total IMSI identity request messages for 2G service.
Total-IMEI-Identity-Req	Total international mobile equipment identity (IMEI) request messages.
3G-IMEI-Identity-Req	Total IMEI identity request messages for 3G service.
2G-IMEI-Identity-Req	Total IMEI identity request messages for 2G service.
Total-IMEISV-Identity-Req	Total international mobile equipment identity-software version (IMEI-SV) identity request messages.
3G-IMEISV-Identity-Req	Total IMEI-SV identity request messages for 3G service.
2G-IMEISV-Identity-Req	Total IMEI-SV identity request messages for 2G service.
Total-(P)TMSI-Identity-Req	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) request messages.
3G-(P)TMSI-Identity-Req	Total P-TMSI identity request messages for 3G service.
2G-(P)TMSI-Identity-Req	Total P-TMSI identity request messages for 2G service.
Retransmission	Indicates the statistics of identity request messages retransmitted.
Ret-Tot-Identity-Req	Total identity request messages.
Ret-Tot-IMSI-Identity-Req	Total international mobile subscriber identity (IMSI) identity request messages retransmitted.
Ret-3G-IMSI-Identity-Req	Total IMSI identity request messages retransmitted for 3G service.
Ret-2G-IMSI-Identity-Req	Total IMSI identity request messages retransmitted for 2G service.
Ret-Tot-IMEI-Identity-Req	Total international mobile equipment identity (IMEI) request messages retransmitted.
Ret-3G-IMEI-Identity-Req	Total IMEI identity request messages retransmitted for 3G service.
Ret-2G-IMEI-Identity-Req	Total IMEI identity request messages retransmitted for 2G service.
Ret-Tot-IMEISV-Identity-Req	Total international mobile equipment identity-software version (IMEI-SV) identity request messages retransmitted.
Ret-3G-IMEISV-Identity-Req	Total IMEI-SV identity request messages retransmitted for 3G service.
Ret-2G-IMEISV-Identity-Req	Total IMEI-SV identity request messages retransmitted for 2G service.
Ret-Tot-(P)TMSI-Ident-Req	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) request messages retransmitted.
Ret-3G-(P)TMSI-Ident-Req	Total P-TMSI identity request messages retransmitted for 3G service.
Ret-2G-(P)TMSI-Ident-Req	Total P-TMSI identity request messages retransmitted for 2G service.
Identity Response	Indicates the statistics of identity request messages.

Field	Description
Total-Identity-Rsp	Total identity request response messages.
Total-IMSI-Identity-Rsp	Total international mobile subscriber identity (IMSI) identity request response messages.
3G-IMSI-Identity-Rsp	Total IMSI identity request response messages for 3G service.
2G-IMSI-Identity-Rsp	Total IMSI identity request response messages for 2G service.
Total-IMEI-Identity-Rsp	Total international mobile equipment identity (IMEI) request response messages.
3G-IMEI-Identity-Rsp	Total IMEI identity request response messages for 3G service.
2G-IMEI-Identity-Rsp	Total IMEI identity request response messages for 2G service.
Total-IMEISV-Identity-Rsp	Total international mobile equipment identity-software version (IMEI-SV) identity request response messages.
3G-IMEISV-Identity-Rsp	Total IMEI-SV identity request response messages for 3G service.
2G-IMEISV-Identity-Rsp	Total IMEI-SV identity request response messages for 2G service.
Total-(P)TMSI-Identity-Rsp	Total Packet-Temporary Mobile Subscriber Identity (P-TMSI) request response messages.
3G-(P)TMSI-Identity-Rsp	Total P-TMSI identity request response messages for 3G service.
2G-(P)TMSI-Identity-Rsp	Total P-TMSI identity request response messages for 2G service.
Total-Unknown-Identity-Rsp	Total identity response messages for unknown identity.
3G-Unknown-Identity-Rsp	Total identity response messages for unknown identity for 3G service.
2G-Unknown-Identity-Rsp	Total identity response messages for unknown identity for 2G service.
Timers	Indicates the statistics of different message and procedure timers.
Total-T3350-Expiry	Total number of times the T3350 timer timed-out.
3G-T3350-Expiry	Total number of times the T3350 timer timed-out for 3G service.
2G-T3350-Expiry	Total number of times the T3350 timer timed-out for 2G service.
Total-T3360-Expiry	Total number of times the T3360 timer timed-out.
3G-T3360-Expiry	Total number of times the T3360 timer timed-out for 3G service.
2G-T3360-Expiry	Total number of times the T3360 timer timed-out for 2G service.
Total-T3370-Expiry	Total number of times the T3370 timer timed-out.
3G-T3370-Expiry	Total number of times the T3370 timer timed-out for 3G service.
2G-T3370-Expiry	Total number of times the T3370 timer timed-out for 2G service.
Total-T3322-Expiry	Total number of times the T3322 timer timed-out.
3G-T3322-Expiry	Total number of times the T3322 timer timed-out for 3G service.
2G-T3322-Expiry	Total number of times the T3322 timer timed-out for 2G service.
Total-T3313-Expiry	Total number of times the T3313 timer timed-out.
3G-T3313-Expiry	Total number of times the T3313 timer timed-out for 3G service.

Field	Description
2G-T3313-Expiry	Total number of times the T3313 timer timed-out for 2G service.
2G Specific Timers	Indicates the statistics of 2G specific timers timeout events.
T3314-Expiry(Ready Timer)	Total number of times the 2G specific ready timer timed-out for 2G service.
Ranap Procedures	Indicates the statistics of Radio Access Network Application Part (RANAP) procedures.
Initial UE Rcvd	Total number of initial user equipment (UE) messages received.
Common Id sent	Total number of common identifier messages sent.
Direct Transfer Sent	Total number of direct transfer messages sent.
Direct Transfer Rcvd	Total number of direct transfer messages received.
Security Mode Command	Total number of security mode commands received.
Security Mode Complete	Total number of security mode completed.
Security Mode Reject	Total number of security mode commands rejected.
Iu Release Request	Total number of Iu interface release request received.
Iu Release Command	Total number of Iu interface release commands received.
Iu Release Complete	Total number of Iu interface release completed.
Reset Rcvd	Total number of reset requests received.
Retransmitted Reset Rcvd	Total number of retransmitted reset requests received.
Reset Ack Sent	Total number of reset request acknowledgement sent.
Reset Sent	Total number of reset requests sent.
Retransmitted Reset Sent	Total number of reset requests retransmitted.
Reset Ack Rcvd	Total number of reset request acknowledgement received.
Resource Reset Rcvd	Total number of resource reset requests received.
Resource Reset Ack Sent	Total number of resource reset request acknowledgement sent.
Resource Reset Sent	Total number of resource reset request sent.
Resource Reset Ack Rcvd	Total number of resource reset request acknowledgement received.
Overload ctrl Rcvd	Total number of resource overload control message received.
PC Congested Received	Total number of point code (PC) congested message received.
Error Indication Rcvd	Total number of error indication message received.
Error Indication Sent	Total number of error indication message sent.
Location Reporting Control	Total umber of Location Reporting Control procedure messages sent from SGSN.
Location Report	Total umber of messages sent with Location Report from SGSN.
Relocation Required	Total number of message received for Serving Radio Network Subsystem (SRNS) relocation required.

Field	Description
Relocation Command	Total number of message received with SRNS relocation command.
Relocation Request	Total number of SRNS relocation requests received.
Relocation Request Ack	Total number of SRNS relocation requests Ack sent.
Relocation Failure	Total number of SRNS relocation failure messages received.
Relocation Prep Failure	Total number of SRNS relocation preparation failure messages received.
Relocation Cancel	Total number of SRNS relocation cancel messages received.
Relocation Cancel Ack	Total number of SRNS relocation cancel acknowledge messages sent.
Relocation Detect	Total number of SRNS relocation detected.
Relocation Complete	Total number of SRNS relocation completed.
Forward SRNS Context Rcvd	Total number of SRNS contexts forward messages received.
Forward SRNS Context Sent	Total number of SRNS contexts forward messages sent.
NAS-PDU Stats	Indicates the statistics of PDUs for Non-Access Stratum (NAS) signalling procedure.
Received	Indicates the total all type of protocol data units received for NAS procedure.
Sent	Indicates the total all type of protocol data units sent for NAS procedure.
Total-Received-NAS-Pdu	Total all type of protocol data units received for NAS procedure.
Total-Sent-NAS-Pdu	Total all type of protocol data units sent for NAS signalling procedure.
GMM-Received-NAS-Pdu	Total protocol data units received by GPRS mobility management (GMM) service through NAS signalling procedure.
GMM-Sent-NAS-Pdu	Total protocol data units sent by GMM service through NAS signalling procedure.
SM-Received-NAS-Pdu	Total protocol data units received by Service Management (SM) service through NAS procedure.
SM-Sent-NAS-Pdu	Total protocol data units sent by SM service for NAS procedure.
SMS-Received-NAS-Pdu	Total number of SMS messages received by SGSN with NAS packet data unit (PDU).
SMS-Sent-NAS-Pdu	Total number of SMS messages sent by SGSN with NAS packet data unit (PDU).
UnIdentified-NAS-Pdu	Total number of unknown type PDUs received for NAS procedure.
Dropped NAS-PDUS	Indicates the statistics of protocol data units dropped for NAS procedure.
Total-Dropped-NAS-Pdu	Total number of PDUs dropped for NAS procedure.
Redirection Indication	This group indicates the statistics of counters related to Redirection indication reasons.
PLMN not allowed	Total number of redirections occurred due to requested PLMN not allowed for specific session.
Location area not allowed	Total number of redirections occurred due to requested Location Area not allowed for specific session.
Roaming not allowed in LA	Total number of redirections occurred due to roaming was not allowed in a location area for specific session.

Field	Description
No GPRS services in PLMN	Total number of redirections occurred due to non-availability of GPRS service in PLMN for specific session.
CS/PS co-ord required	Total number of redirections occurred as co-ordination between CS and PS service was missing for specific session.
Unknown Reasons	Total number of redirections occurred for specific session due to reasons other than listed in this table.
Drop Reason	Indicates the statistics of NAS protocol data unit drop reasons.
Nas-Un-identified type	Total number of NAS-PDUs dropped due to unidentified type of PDU.
Nas-Invalid Remote Address	Total number of NAS-PDUs dropped due to invalid remote address in PDU.
Nas-NAS-PDU not present	Total number of NAS-PDUs dropped due to missing NAS information.
Nas-Invalid Local Address	Total number of NAS-PDUs dropped due to invalid local address in PDU.
Nas-From unknown RNC	Total number of NAS-PDUs dropped as PDU from unknown RNC.
Nas-From unknown RA	Total number of NAS-PDUs dropped as PDU from unknown routing area.
Nas-From unknown Subscriber	Total number of NAS-PDUs dropped as PDU from unknown subscriber.
Duplicate- <i>iu-con-id</i>	Total number of NAS-PDUs dropped as PDU contains duplicate <i>Iu</i> control identifier.
<i>Iu-Con-id</i> processing failed	The total number of PDUs dropped for NAS procedure as <i>Iu</i> connection id processing failed in procedure.
Nas-From unknown PLMN	The total number of PDUs dropped for NAS procedures as NAS signalling was requested from unknown PLMN.
Another <i>iu</i> or 2g available	The total number of PDUs dropped for NAS procedures as another <i>Iu</i> interface of 2G session was available for specific NAS signalling procedure.
Internal Errors	Indicates the statistics of NAS protocol data unit dropped due to internal errors.
Total-Internal-Errors	Total number of NAS PDU dropped due to internal errors.
Attach Requests Drops	Indicates the statistics of NAS PDU dropped due to attach request errors.
Memory Failures	Total number of NAS PDU dropped due to memory failures.
Decode Failures	Total number of NAS PDU dropped due to decoding failures.
Msg in Invalid state	Total number of NAS PDU dropped due to invalid state of message.
Another Proc in Progress	Total number of NAS PDU dropped as another procedure is in progress.
Sent Msg Unavailable	Total number of NAS PDU dropped due to unavailability of sent messages.
Other Failures	Total number of NAS PDU dropped due to failures other than listed in this table.
Routing Area Update Requests Drops	Indicates the statistics of NAS PDU dropped due to routing area update request drops.
Memory Failures	Total number of NAS PDUs dropped due to routing area update request drops by memory failures.
Decode Failures	Total number of NAS PDUs dropped due to routing area update request drops by decoding failures.

Field	Description
Msg in Invalid state	Total number of NAS PDUs dropped due to routing area update request drops where message is not in valid state.
Another Proc in Progress	Total number of NAS PDUs dropped due to routing area update request drops where another procedure is in progress.
Sent Msg Unavailable	Total number of NAS PDUs dropped due to routing area update request drops where sent messages are not available.
Other Failures	Total number of NAS PDUs dropped due to routing area update request drops where reasons are other than listed in this table.
Detach Requests Drops	Indicates the statistics of NAS PDU dropped due to detach request drops.
Memory Failures	Total number of NAS PDUs dropped due to detach request drops by memory failures.
Decode Failures	Total number of NAS PDUs dropped due to detach request drops by decoding failures.
Msg in Invalid state	Total number of NAS PDUs dropped due to detach request drops where message is not in valid state.
Another Proc in Progress	Total number of NAS PDUs dropped due to detach request drops where another procedure is in progress.
Sent Msg Unavailable	Total number of NAS PDUs dropped due to detach request drops where sent messages are not available.
Other Failures	Total number of NAS PDUs dropped due to detach request drops where reasons are other than listed in this table.
Service Requests Drops	Indicates the statistics of NAS PDU dropped due to service request drops.
Memory Failures	Total number of NAS PDUs dropped due to service request drops by memory failures.
Decode Failures	Total number of NAS PDUs dropped due to service request drops by decoding failures.
Msg in Invalid state	Total number of NAS PDUs dropped due to service request drops where message is not in valid state.
Another Proc in Progress	Total number of NAS PDUs dropped due to service request drops where another procedure is in progress.
Sent Msg Unavailable	Total number of NAS PDUs dropped due to service request drops where sent messages are not available.
Other Failures	Total number of NAS PDUs dropped due to service request drops where reasons are other than listed in this table.
SMS Message Drops	Indicates the statistics of NAS PDU dropped due to SMS Message drops.
Memory Failures	Total number of NAS PDUs dropped due to SMS Message drops by memory failures.
Decode Failures	Total number of NAS PDUs dropped due to SMS Message drops by decoding failures.
Msg in Invalid state	Total number of NAS PDUs dropped due to SMS Message drops where message is not in valid state.
Unexpected Message	Total number of NAS PDUs dropped due to SMS Message drops where reason as unexpected message arrived.
Other Drops	Indicates the statistics of NAS PDU dropped due to other drops.

Field	Description
Memory Failures	Total number of NAS PDUs dropped due to other drops by memory failures.
Decode Failures	Total number of NAS PDUs dropped due to other drops by decoding failures.
Msg in Invalid state	Total number of NAS PDUs dropped due to other drops where message is not in valid state.
Other Failures	Total number of NAS PDUs dropped due to other drops where reasons are other than listed in this table.
Iu cleared due to other failures	Indicates the statistics of causes for NAS PDU dropped due to Iu interface cleared by other failures.
Reset-received	Total number of NAS PDU dropped due to Iu interface cleared when reset message received.
Reset-resource-received	Total number of NAS PDU dropped due to Iu interface cleared when reset resource message received.
RNC-PC-Down	Total number of NAS PDU dropped due to Iu interface cleared by RNC and/or PC down.
Total Relocation Failure	This group displays the statistics of total relocation procedure failures.
Relocation Failure Causes	This group displays the statistics of relocation procedure failure causes.
RAB Preempted	Total number of relocation procedure failure occurred due to RAB Preempted cause.
Trelocoverall Expiry	Total number of relocation procedure failure occurred due to expiry of Relocation Overall timer.
Trelocprep Expiry	Total number of relocation procedure failure occurred due to expiry of Relocation Preparation timer.
Treloc complete Expiry	Total number of relocation procedure failure occurred due to expiry of Relocation Complete timer.
Tqueuing Expiry	Total number of relocation procedure failure occurred due to expiry of Relocation Queuing timer.
Relocation Triggered	Total number of relocation procedures failed due to triggering of another relocation procedure.
Unable to establ dur reloc	Total number of relocation procedures failed due to unable to establish the connection during relocation procedure.
Unknown Target RNC	Total number of relocation procedures failed due to unknown target RNC.
Relocation Cancelled	Total number of relocation procedures failed due to cancellation of relocation procedures.
Successful Relocation	Total number of relocation procedures failed due to successful completion of relocation procedure.
Req integ protec algo NS	Total number of relocation procedures failed due to required integrity protection algorithms in name server (NS) system.
Conflict with integ proc	Total number of relocation procedures failed due to conflict with integrity procedure.
Failure in Radio Intf Proc	Total number of relocation procedures failed due to failure in radio interface procedure.
Release due to UTRAN	Total number of relocation procedures failed due to RELEASE command from UTRAN.
User Inactivity	Total number of relocation procedures failed due to inactivity at user level.
Time Critical Relocation	Total number of relocation procedures failed due to time critical relocation procedure happened or triggered.

Field	Description
Requested Traffic Class NA	Total number of relocation procedures failed due to non-availability to requested traffic class for user session.
Invalid RAB Params value	Total number of relocation procedures failed due to invalid value in RAB parameters.
Requested Max Bit Rate NA	Total number of relocation procedures failed due to non-availability to requested MBR for user session in uplink and downlink direction.
Req Max Bit Rate NA for DL	Total number of relocation procedures failed due to non-availability to requested MBR for user session in downlink direction.
Req Max Bit Rate NA for UL	Total number of relocation procedures failed due to non-availability to requested MBR for user session in uplink direction.
Req Guaran Bit Rate NA	Total number of relocation procedures failed due to non-availability to requested GBR for user session in uplink and downlink direction.
Req Guaran Bit Rate NA DL	Total number of relocation procedures failed due to non-availability to requested GBR for user session in downlink direction.
Req Guaran Bit Rate NA UL	Total number of relocation procedures failed due to non-availability to requested GBR for user session in uplink direction.
Req Trans-delay not achiev	Total number of relocation procedures failed as requested transmission delay was not achieved.
Invalid RAB params comb	Total number of relocation procedures failed due to invalid combination in RAB parameters.
Cond violation for SDU	Total number of relocation procedures failed due to condition violation for service data unit (SDU).
Cond viol traff handling	Total number of relocation procedures failed due to condition violation in traffic handling.
Cond viol guaran bitrate	Total number of relocation procedures failed due to condition violation in GBR.
User plane vers no support	Total number of relocation procedures failed as user plan version is not supported.
Iu UP Failure	Total number of relocation procedures failed due to user plan failure in Iu interface.
TRELOCalloc Expiry	Total number of relocation procedures failed due to expiry to relocation timer.
Reloc Fail in Tgt system	Total number of relocation procedures failed due to relocation procedure failure in target system.
Invalid RAB ID	Total number of relocation procedures failed due to invalid RAB identifier.
No Remaining RAB	Total number of relocation procedures failed as no RAB was available for this procedure.
Interact with other proc	Total number of relocation procedures failed as system was interacting with other system procedures at the time of relocation trigger.
Repeated Integ Check Fail	Total number of relocation procedures failed due to repeated failure in integrity check.
Requested Req type not sup	Total number of relocation procedures failed as request type was not supported.
Request superseded	Total number of relocation procedures failed as relocation procedure request was superseded by another request.
UE gen signal conn release	Total number of relocation procedures failed as signal connection was released by UE.
Resource opt relocation	Total number of relocation procedures failed due to optimization of resource during relocation procedure.

Field	Description
Requested info not avail	Total number of relocation procedures failed as requested information for this procedure was not available.
Relocation desirable for radio reasons	Total number of relocation procedures failed as relocation was desirable for radio reasons and now not required.
Relocation no sup in tgt	Total number of relocation procedures failed as relocation procedure was not supported in target system.
Directed Retry	Total number of relocation procedures failed because system directed the Retry command.
Radio conn with UE lost	Total number of relocation procedures failed due to radio connection lost with UE.
RNC unabl to establish RFC	Total number of relocation procedures failed as RNC couldn't establish all RAB subflow combinations indicated within the RAB Parameters IE.
Deciphering keys not avail	Total number of relocation procedures failed due to non-availability of de-ciphering keys.
Dedicated Assist data NA	Total number of relocation procedures failed because RNC is not able to successfully deliver the requested dedicated assistance data to the UE.
Relocation tgt not allow	Total number of relocation procedures failed as relocation is not allowed on the target system.
Location report congestion	Total number of relocation procedures failed due to congestion status in location report.
Reduce load in serving cel	Total number of relocation procedures failed as system was reducing load in service cell.
No radio res in tgt cell	Total number of relocation procedures failed due to no radio resource was available in target cell.
GERAN Iu-mode failure	Total number of relocation procedures failed as the GERAN cannot provide an appropriate RAB due to limited capabilities within GERAN.
Access restricted due to shared nws	Total number of relocation procedures failed as access to target system restricted due to shared networks.
Incoming relocation no support due to PUESBINE	Total number of relocation procedures failed as the incoming relocation cannot be accepted by the target RNC because of the Provision of UE Specific Behavior Information to Network Entities (PUESBINE) feature.
Load in tgt great than src	Total number of relocation procedures failed because the target cell's traffic load is higher than that in the source cell.
MBMS-No multicast for UE	Total number of relocation procedures failed because the UE does not have any active multicast service.
MBMS-Unknown UE ID	Total number of relocation procedures failed because the CN does not know the UE or unknown UE identifier.
MBMS session start success no data bearer necessary	Total number of relocation procedures failed because the MBMS Session Start procedure was successfully performed, but the RNC does not have any interested UE.
MBMS-supersede due to NNSF	Total number of relocation procedures failed as the MBMS Session Start procedure was rejected because NAS Node Selection Function (NNSF) towards another CN node.
MBMS-UE link already done	Total number of relocation procedures failed because the UE has already been linked to the given Multicast service
MBMS-UE delink failure	Total number of relocation procedures failed because the UE had not been linked to the given Multicast service.

Field	Description
TMGI Unknown	Total number of relocation procedures failed due to requested MBMS action failure because of the indicated Temporary Mobile Group Identity (TMGI) is unknown.
IP Multicast addr & APN invalid	Total number of relocation procedures failed due to requested MBMS registration failed as the IP Multicast Address and APN are not valid.
MBMS deregistration reject	Total number of relocation procedures failed as the MBMS De-registration was rejected because of implicit registration.
MBMS-Request superseded	Total number of relocation procedures failed as MBMS Registration or De-registration was superseded due to another ongoing procedure.
MBMS Dereg during sess nal	Total number of relocation procedures failed as MBMS De-registration is not allowed during the MBMS session.
MBMS-No data bearer necess	Total number of relocation procedures failed as the RNC no longer have any UEs interested in the MBMS data bearer.
Periodic Loc info no avail	Total number of relocation procedures failed as no UE position estimate or location information was available when the periodic report was triggered.
GTP resources unavailable	Total number of relocation procedures failed as the RNC initiates RAB Release Request procedure when GTP resource was not available and error cause value, if it received, with a GTP-U error indication.
TMGI in use and overlap MBMS srvc in area	Total number of relocation procedures failed as the RNC has an MBMS Session up and running with that Temporary Mobile Group Identity (TMGI) and a parallel MBMS session with the same TMGI in another overlapping MBMS Service Area is not allowed.
MBMS-no cell in MBMS area	Total number of relocation procedures failed as the RNC does not have any cell of the indicated MBMS Service Area.
No Iu CS UP relocation	Total number of relocation procedures failed as the relocation is triggered by CS call and the source RNC has no Iu CS user plane.
Successful MBMS sess start IP MC bearer established	Total number of relocation procedures failed because the MBMS Session Start procedure was successfully performed and IP multicast bearer already established.
CS Fallback triggered	Total number of relocation procedures failed as CS fallback to support earlier version of service triggered.
Unknown	Total number of relocation procedures failed due to reasons not listed in this table or unknown to system.
Miscellaneous Statistics	Indicates the miscellaneous statistics of causes for NAS PDU dropped.
Mismatching PTMSI signatures	Indicates the statistics of number of NAS PDU dropped due to mismatch in P-TMSI signatures.
Total-PTMSI-Sig-Mismtach	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures for attach and detach procedures.
Total-Att-PTMSI-Sig-Mismatch	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in attach procedures for 2G and 3G service.
3G-Att-PTMSI-Sig-Mismatch	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in attach procedures for 3G service.

Field	Description
2G-Att-PTMSI-Sig-Mismatch	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in attach procedures for 2G service.
Total-Det-PTMSI-Sig-Mismatch	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in detach procedures for 2G and 3G service.
3G-Det-PTMSI-Sig-Mismatch	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in detach procedures for 3G service.
2G-Det-PTMSI-Sig-Mismatch	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in detach procedures for 2G service.
Total-Rau-PTMSI-Sig-Mismatch	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in routing area update procedures for 2G and 3G service.
3G-Rau-PTMSI-Sig-Mismatch	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in routing area update procedures for 3G service.
2G-Rau-PTMSI-Sig-Mismatch	Total number of NAS PDU dropped due to mismatch in P-TMSI signatures in routing area update procedures for 2G service.
Auth Triplets Reuse Counter	Description: Total authentication triplet reuse by SGSN. SGSN tries to get authentication vectors from HLR; when it does not receive response/vectors from HLR, SGSN authenticates MS successfully using existing/locally stored vectors provided reuse of the triplet vector is enabled in configuration. Triggers: Increments when the SGSN sends Auth Request to MS with total triplet reuse of vectors (2G and 3G) for the above condition. Availability: per RA, per RNC, per GPRS/SGSN service
3G-Auth Triplets Reuse	Description: Total authentication triplet reuse for 3G service. SGSN tries to get authentication vectors from HLR; when it does not receive response/vectors from HLR, SGSN authenticates MS successfully using existing/locally stored vectors provided reuse of the triplet vector is enabled in configuration. Triggers: Increments when the SGSN sends Auth Request to MS with 3G triplet reuse of vector for the above condition. Availability: per RA, per RNC, per SGSN service
2G-Auth Triplets Reuse	Description: Total authentication triplet reuse for 2G service. SGSN tries to get authentication vectors from HLR; when it does not receive response/vectors from HLR, SGSN authenticates MS successfully using existing/locally stored vectors provided reuse of the triplet vector is enabled in configuration. Triggers: Increments when the SGSN sends Auth Request to MS with 2G triplet reuse of vector for the above condition. Availability: per RA, per RNC, per GPRS service
New Connection rejected due to overload	Total number of NAS PDU dropped as new connection rejected due to overload.
Rnc Overload Statistics	Indicates the RNC overload statistics.
Total Procedures Rejected due to overload	Total number of procedures rejected due to overload at RNC.
Dropped Attaches	Total number of attach procedures dropped due to overload at RNC.
Dropped Serv-req(data)	Total number of service request procedures dropped due to overload at RNC.
Skipped Ptmsi reallocations	Total number of P-TMSI reallocation requests skipped due to overload at RNC.

Field	Description
Skipped Authentication	Total number of authentication procedures skipped due to overload at RNC.
SMS Error Stats	Indicates the statistics of errors for short message service (SMS).
CP-ERROR (Tx)	Total number of control program errors sent (in upload direction) for short message service (SMS).
Congestion	Total number of control program errors sent (in upload direction) for short message service (SMS) due to congestion.
Invalid Mandatory Info	Total number of control program errors sent (in upload direction) for short message service (SMS) due to invalid information in mandatory field.
Invalid Message Type	Total number of control program errors sent (in upload direction) for short message service (SMS) due to invalid message type.
Invalid semantic	Total number of control program errors sent (in upload direction) for short message service (SMS) due to invalid semantic in message.
Invalid Protocol State	Total number of control program errors sent (in upload direction) for short message service (SMS) due to invalid state of protocol in message.
Invalid IE	Total number of control program errors sent (in upload direction) for short message service (SMS) due to invalid information element in message.
Protocol Error	Total number of control program errors sent (in upload direction) for short message service (SMS) due to invalid protocol error.
Network Overload Protection	This group displays the statistics related to network overload protection function.
Attach requests queued in the pacing queue	Total number of attach requests queued in the pacing queue by network overload protection function.
Inter SGSN RAU requests queued in the pacing queue	Total number of Inter SGSN RAU requests queued in the pacing queue by network overload protection function.
Number of Inter SGSN RAU and Attach requests in the pacing queue	Total number of Inter SGSN RAU and attach requests queued in the pacing queue by network overload protection function.
Attach requests successfully dequeued from the pacing queue	Total number of attach requests successfully removed from the pacing queue by network overload protection function.
Inter SGSN RAU requests successfully dequeued from the pacing queue	Total number of Inter SGSN RAU requests successfully removed from the pacing queue by network overload protection function.
Attaches rejected	Total number of attach requests rejected by network overload protection function.
Inter SGSN RAUs rejected	Total number of Inter SGSN RAUs requests rejected by network overload protection function.
Attaches dropped	Total number of attach requests dropped by network overload protection function.
Inter SGSN RAUs dropped	Total number of Inter SGSN RAUs requests dropped by network overload protection function.
Attaches discarded due to excess wait time in the pacing queue	Total number of attach requests discarded by network overload protection function due to excess wait time in the pacing queue.

Field	Description
InterSGSN RAUs discarded due to excess waittime in the pacing queue	Total number of InterSGSN RAUs requests discarded by network overload protection function due to excess waittime in the pacing queue.
Session Management Messages Statistics	
Activate Context Request	Indicates the statistics of context activate request in session management service.
Total-Actv-Request	Total number of request messages received for 2G and 3G context activation including primary and secondary.
3G-Actv-Request	Total number of request messages received for 3G context activation including primary and secondary.
2G-Actv Request	Total number of request messages received for 2G context activation including primary and secondary.
Primary-Actv-Request	Total number of request messages received for 2G and 3G primary context activation.
3G-Primary-Actv-Request	Total number of request messages received for 3G primary context activation.
2G-Primary-Actv-Request	Total number of request messages received for 2G primary context activation.
Secondary-Actv-Request	Total number of request messages received for 2G and 3G secondary context activation.
3G-Secondary-Actv-Request	Total number of request messages received for 3G secondary context activation.
2G-Secondary-Actv-Request	Total number of request messages received for 2G secondary context activation.
Actv-Request-Nrpca	Total number of network requested PDP context activation request messages received from GGSN.
Activate Context Accept	Indicates the statistics of context activate request accepted in session management service.
Total-Actv-Accept	Total number of request messages accepted for 2G and 3G context activation including primary and secondary type.
3G-Actv-Accept	Total number of request messages accepted for 3G context activation including primary and secondary type.
2G-Actv Accept	Total number of request messages accepted for 2G context activation including primary and secondary type.
Primary-Actv-Accept	Total number of request messages accepted for 2G and 3G primary context activation.
3G-Primary-Actv-Accept	Total number of request messages accepted for 3G primary context activation.
2G-Primary-Actv-Accept	Total number of request messages accepted for 2G primary context activation.
Secondary-Actv-Accept	Total number of request messages accepted for 2G and 3G secondary context activation.
3G-Secondary-Actv-Accept	Total number of request messages accepted for 3G secondary context activation.
2G-Secondary-Actv-Accept	Total number of request messages accepted for 2G secondary context activation.
Activate Context Reject	Indicates the statistics of request messages rejected for 2G and 3G context activation including primary and secondary type.
Total-Actv-Reject	Total number of request messages rejected for 2G and 3G context activation including primary and secondary type.

Field	Description
3G-Actv-Reject	Total number of request messages rejected for 3G context activation including primary and secondary type.
2G-Actv-Reject	Total number of request messages rejected for 2G context activation including primary and secondary type.
Primary-Actv-Reject	Total number of request messages rejected for 2G and 3G primary context activation.
3G-Primary-Actv-Reject	Total number of request messages rejected for 3G primary context activation.
2G-Primary-Actv-Reject	Total number of request messages rejected for 2G primary context activation.
Secondary-Actv-Reject	Total number of request messages rejected for 2G and 3G secondary context activation.
3G-Secondary-Actv-Reject	Total number of request messages rejected for 3G secondary context activation.
2G-Secondary-Actv-Reject	Total number of request messages rejected for 2G secondary context activation.
Activate Context Failure	
Total-Actv-Failure	Total number of combined primary and secondary PDP context activation failures for 2G and 3G services.
3G-Actv-Failure	Total number of PDP context activation failures for 3G services.
2G-Actv Failure	Total number of PDP context activation failures for 2G services.
Internal Failure	Total number of PDP context activation failures for 2G services due to internal failures.
Ongoing Procedure	Total number of PDP context activation failures for 2G services due to ongoing procedure collisions.
Primary-Actv-Failure	Total number of primary PDP context activation failures for 2G and 3G services.
3G-Primary-Actv-Failure	Total number of primary PDP context activation failures for 3G services.
2G-Primary-Actv-Failure	Total number of primary PDP context activation failures for 2G services.
Internal Failure	Total number of primary PDP context activation failures for 2G services due to internal failures.
Ongoing Procedure	Total number of primary PDP context activation failures for 2G services due to ongoing procedure collisions.
Secondary-Actv-Failure	Total number of secondary PDP context activation failures for 2G and 3G services.
3G-Secondary-Actv-Failure	Total number of secondary PDP context activation for 3G service failed.
2G-Secondary-Actv-Failure	Total number of secondary PDP context activation failures for 2G services.
Internal Failure	Total number of secondary PDP context activation failures for 2G services due to internal failures.
Ongoing Procedure	Total number of secondary PDP context activation failures for 2G services due to ongoing procedure collisions.
2G-Activation-Internal-Failure-Causes	
Resource Alloc Fail	Total number of 2G context activation failures due to internal failures of cause type 'resource allocation failure'.
CPC Send Fail	Total number of 2G context activation failures due to internal failures of cause type 'CPC send failure'.

Field	Description
Activate Primary PDP Context Denied	
3G-Operator Determined Barring	Total number of requests to activate primary PDP context for 3G service rejected due to operator determined barring.
2G-Operator Determined Barring	Total number of requests to activate primary PDP context for 2G service rejected due to operator determined barring.
3G-Insufficient Resources	Total number of requests to activate primary PDP context for 3G service rejected due to insufficient resources.
2G-Insufficient Resources	Total number of requests to activate primary PDP context for 2G service rejected due to insufficient resources.
3G-Network Failure	Total number of requests to activate primary PDP context for 3G service rejected due to network failure.
2G-Network Failure	Total number of requests to activate primary PDP context for 2G service rejected due to network failure.
3G-Missing or Unknown APN	Total number of requests to activate primary PDP context for 3G service rejected due to missing or unknown APN in request message.
2G-Missing or Unknown APN	Total number of requests to activate primary PDP context for 2G service rejected due to missing or unknown APN in request message.
3G-Unknown PDP Addr/type	Total number of requests to activate primary PDP context for 3G service rejected due to unknown type/address in request.
2G-Unknown PDP Addr/type	Total number of requests to activate primary PDP context for 2G service rejected due to unknown type/address in request.
3G-User Auth Failed	Total number of requests to activate primary PDP context for 3G service rejected due to failure in user authentication.
2G-User Auth Failed	Total number of requests to activate primary PDP context for 2G service rejected due to failure in user authentication.
3G-Rejected By GGSN	Total number of requests to activate primary PDP context for 3G service rejected as request rejected by the GGSN.
2G-Rejected By GGSN	Total number of requests to activate primary PDP context for 2G service rejected as request rejected by the GGSN.
3G-Unspecified Error	Total number of requests to activate primary PDP context for 3G service rejected due to error which is not specified in this table or unknown.
2G-Unspecified Error	Total number of requests to activate primary PDP context for 2G service rejected due to error which is not specified in this table or unknown.
3G-Svc Option Not Supported	Total number of requests to activate primary PDP context for 3G service rejected as requested service is not supported.
2G-Svc Option Not Supported	Total number of requests to activate primary PDP context for 2G service rejected as requested service is not supported.
3G-Svc Opt Not Subscribed	Total number of requests to activate primary PDP context for 3G service rejected as subscriber is not subscriber to requested service.

Field	Description
2G-Svc Opt Not Subscribed	Total number of requests to activate primary PDP context for 2G service rejected as subscriber is not subscriber to requested service.
3G-Svc Opt Tmp Out of Order	Total number of requests to activate primary PDP context for 3G service rejected as requested service option is temporarily out of order.
2G-Svc Opt Tmp Out of Order	Total number of requests to activate primary PDP context for 2G service rejected as requested service option is temporarily out of order.
3G-APN-Restriction Incompatible	Total number of requests to activate primary PDP context for 3G service rejected due to restriction of aPN or incompatibility of APN for service.
2G-APN-Restriction Incompatible	Total number of requests to activate primary PDP context for 2G service rejected due to restriction of aPN or incompatibility of APN for service.
3G-Semantically Incorrect	Total number of requests to activate primary PDP context for 3G service rejected due to semantically incorrect message.
2G-Semantically Incorrect	Total number of requests to activate primary PDP context for 2G service rejected due to semantically incorrect message.
3G-Invalid Mandatory Info	Total number of requests to activate primary PDP context for 3G service rejected as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of requests to activate primary PDP context for 2G service rejected as mandatory information in message is invalid.
3G-Msg Non Existent	Total number of requests to activate primary PDP context for 3G service rejected due to non-existent type of message.
2G-Msg Non Existent	Total number of requests to activate primary PDP context for 2G service rejected due to non-existent type of message.
3G-IE Non Existent	Total number of requests to activate primary PDP context for 3G service rejected due to non-existence of information element.
2G-IE Non Existent	Total number of requests to activate primary PDP context for 2G service rejected due to non-existence of information element.
3G-Conditional IE Error	Total number of requests to activate primary PDP context for 3G service rejected due to error in conditional information element.
2G-Conditional IE Error	Total number of requests to activate primary PDP context for 2G service rejected due to error in conditional information element.
3G-Msg Not Compatible with State	Total number of requests to activate primary PDP context for 3G service rejected as message type is not compatible with protocol state.
2G-Msg Not Compatible with State	Total number of requests to activate primary PDP context for 2G service rejected as message type is not compatible with protocol state.
3G-Recovery on Timer Expiry	Total number of requests to activate primary PDP context for 3G service rejected as timer expired for recovery.
2G-Recovery on Timer Expiry	Total number of requests to activate primary PDP context for 2G service rejected as timer expired for recovery.
3G-Proto Err Unspecified	Total number of requests to activate primary PDP context for 3G service rejected due to unspecified protocol error.

Field	Description
2G-Proto Err Unspecified	Total number of requests to activate primary PDP context for 2G service rejected due to unspecified protocol error.
Activate Secondary PDP Context Denied	Indicates the statistics of reason to deny secondary PDP context activation for 2G and 3G service denied.
3G-Operator Determined Barring	Total number of requests to activate primary PDP context for 3G service rejected due to operator determined barring.
2G-Operator Determined Barring	Total number of requests to activate primary PDP context for 2G service rejected due to operator determined barring.
3G-Insufficient Resources	Total number of requests to activate secondary PDP context for 3G service rejected due to insufficient resources.
2G-Insufficient Resources	Total number of requests to activate secondary PDP context for 2G service rejected due to insufficient resources.
3G-Rej By Ggsn	Total number of requests to activate secondary PDP context for 3G service rejected as request rejected by the GGSN.
2G-Rej By Ggsn	Total number of requests to activate secondary PDP context for 2G service rejected as request rejected by the GGSN.
3G-Actv Rej Unspecified	Total number of requests to activate secondary PDP context for 3G service rejected due to error which is not specified in this table or unknown.
2G-Actv Rej Unspecified	Total number of requests to activate secondary PDP context for 2G service rejected due to error which is not specified in this table or unknown.
3G-Svc Opt Not Supported	Total number of requests to activate secondary PDP context for 3G service rejected as requested service option is not supported.
2G-Svc Opt Not Supported	Total number of requests to activate secondary PDP context for 2G service rejected as requested service option is not supported.
3G-Svc Opt Not Subscribed	Total number of requests to activate secondary PDP context for 3G service rejected as subscriber is not subscriber to requested service.
2G-Svc Opt Not Subscribed	Total number of requests to activate secondary PDP context for 2G service rejected as subscriber is not subscriber to requested service.
3G-Svc Option Tmp Out Of Order	Total number of requests to activate secondary PDP context for 3G service rejected as requested service option is temporarily out of order.
2G-Svc Option Tmp Out Of Order	Total number of requests to activate secondary PDP context for 2G service rejected as requested service option is temporarily out of order.
3G-Sem Error In TFT Op	Total number of requests to activate secondary PDP context for 3G service rejected due to semantic error in subscriber traffic flow template operation.
2G-Sem Error In TFT Op	Total number of requests to activate secondary PDP context for 2G service rejected due to semantic error in subscriber traffic flow template operation.
3G-Syn Error In TFT Op	Total number of requests to activate secondary PDP context for 3G service rejected due to syntax error in subscriber traffic flow template operation.
2G-Syn Error In TFT Op	Total number of requests to activate secondary PDP context for 2G service rejected due to syntax error in subscriber traffic flow template operation.

Field	Description
3G-Unknown Ctx	Total number of requests to activate secondary PDP context for 3G service rejected due to unknown PDP context name in request message.
2G-Unknown Ctx	Total number of requests to activate secondary PDP context for 2G service rejected due to unknown PDP context name in request message.
3G-Sem Error In Pkt Filter	Total number of requests to activate secondary PDP context for 3G service rejected due to semantic error in packet filter.
2G-Sem Error In Pkt Filter	Total number of requests to activate secondary PDP context for 2G service rejected due to semantic error in packet filter.
3G-Syn Errors In Pkt Filter	Total number of requests to activate secondary PDP context for 3G service rejected due to syntax error in packet filter.
2G-Syn Errors In Pkt Filter	Total number of requests to activate secondary PDP context for 2G service rejected due to syntax error in packet filter.
3G-Ctx No-TFT Already Actv	Total number of requests to activate secondary PDP context for 3G service rejected as no TFT is active for subscriber.
2G-Ctx No-TFT Already Actv	Total number of requests to activate secondary PDP context for 2G service rejected as no TFT is active for subscriber.
3G-Sem Incorrect Msg	Total number of requests to activate secondary PDP context for 3G service rejected due to semantically incorrect message.
2G-Sem Incorrect Msg	Total number of requests to activate secondary PDP context for 2G service rejected due to semantically incorrect message.
3G-Invalid Mandatory Info	Total number of requests to activate secondary PDP context for 3G service rejected as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of requests to activate secondary PDP context for 2G service rejected as mandatory information in message is invalid.
3G-Msg Non Existent	Total number of requests to activate secondary PDP context for 3G service rejected due to non-existent type of message.
2G-Msg Non Existent	Total number of requests to activate secondary PDP context for 2G service rejected due to non-existent type of message.
3G-IE Non Existent	Total number of requests to activate secondary PDP context for 3G service rejected due to non-existence of information element.
2G-IE Non Existent	Total number of requests to activate secondary PDP context for 2G service rejected due to non-existence of information element.
3G-Conditional IE error	Total number of requests to activate secondary PDP context for 3G service rejected due to error in conditional information element.
2G-Conditional IE error	Total number of requests to activate secondary PDP context for 2G service rejected due to error in conditional information element.
3G-Msg Not Compatible with State	Total number of requests to activate secondary PDP context for 3G service rejected as message type is not compatible with protocol state.
2G-Msg Not Compatible with State	Total number of requests to activate secondary PDP context for 2G service rejected as message type is not compatible with protocol state.

Field	Description
3G-Recovery on Timer Expiry	Total number of requests to activate secondary PDP context for 3G service rejected as timer expired for recovery.
2G-Recovery on Timer Expiry	Total number of requests to activate secondary PDP context for 2G service rejected as timer expired for recovery.
3G-Proto Err Unspecified	Total number of requests to activate secondary PDP context for 3G service rejected due to unspecified protocol error.
2G-Proto Err Unspecified	Total number of requests to activate secondary PDP context for 2G service rejected due to unspecified protocol error.
Activate Context Failure Causes	Indicates the statistics of reasons for context activation procedures for 2G and 3G service.
3G-Iu release before Activate over	Total number of context activation procedures rejected for 3G service due to Iu released before completion of activation procedure.
3G-Guard Timer Expiry	Total number of PDP context activation for 3G failed due to guard timer expiry.
2G-Guard Timer Expiry	Total number of PDP context activation for 2G failed due to guard timer expiry.
3G-Duplicate Activation	Total number of PDP context activation for 3G failed due to duplicate request for activation.
2G-Duplicate Activation	Total number of PDP context activation for 2G failed due to duplicate request for activation.
3G-Failure due to Other Ongoing Procedure	Total number of PDP context activation for 3G failed as other activation procedure for same request is in progress.
2G-Failure due to Other Ongoing Procedure	Total number of PDP context activation for 2G failed as other activation procedure for same request is in progress.
3G-Tunnel Deactivation	Total number of PDP context activation for 3G failed as session tunnel deactivated.
2G-Tunnel Deactivation	Total number of PDP context activation for 2G failed as session tunnel deactivated.
3G-HandOff before Activate over	Total number of PDP context activation for 3G failed as handoff happened before activation procedure completed.
2G-HandOff before Activate over	Total number of PDP context activation for 2G failed as handoff happened before activation procedure completed.
3G-Detach before Activate over	Total number of PDP context activation for 2G failed as detach procedure started before activation procedure completed.
2G-Detach before Activate over	Total number of PDP context activation for 2G failed as detach procedure started before activation procedure completed.
3G-Phase-2-Offload Failures	Description: This proprietary counter indicates the total number of PDP Activation failures due to Phase 2 offloading in 3G service. Triggers: Increments when PDP Activation fails due to Phase 2 offloading. Availability: per SGSN service, per RA, per RNC
2G-Phase-2-Offload Failures	Description: This proprietary counter indicates the total number of PDP Activation failures due to Phase 2 offloading in 2G service. Triggers: Increments when PDP Activation fails due to Phase 2 offloading. Availability: per GPRS service, per RA
3G-Invalid Msg Content	Total number of PDP context activation for 3G failed as request message contains invalid information.

Field	Description
2G-InvalidMsgContent	Total number of PDP context activation for 2G failed as request message contains invalid information.
Duplicate Activate Request	Indicates the statistics of duplicate context activation requests for 2G and 3G service received.
Total-Dup-Actv Req Received	Total number of duplicate context activation requests for 2G and 3G service received.
Total-Dup-3G-Actv Req Received	Total number of duplicate context activation requests for 3G service received.
Total-Dup-2G-Actv Req Received	Total number of duplicate context activation requests for 2G service received.
3G-Dup Req In PDP-ACTIVE State	Indicates the statistics of duplicate context activation requests for 3G service in PDP activate state.
Duplicate TI	Total number of duplicate context activation requests for 3G service in PDP active state with duplicate transaction identifiers (TIs).
Duplicate NSAPI	Total number of duplicate context activation requests for 3G service in PDP active state with duplicate Network Service Access Point Identifier (NSAPI) for 3G service.
Duplicate PDP-Addr and APN	Total number of duplicate context activation requests for 3G service in PDP active state with duplicate PDP address and access point name for 3G service.
2G-Dup Req In PDP-ACTIVE State	Indicates the statistics of duplicate context activation requests for 2G service in PDP activate state.
Duplicate TI	Total number of duplicate context activation requests for 2G service in PDP active state with duplicate transaction identifiers (TIs).
Duplicate NSAPI	Total number of duplicate context activation requests for 2G service in PDP active state with duplicate Network Service Access Point Identifier (NSAPI).
Duplicate PDP-Addr and APN	Total number of duplicate context activation requests for 2G service in PDP active state with duplicate PDP address and access point name.
3G-Dup Req In NOT PDP-ACTIVE State	Indicates the statistics of duplicate context activation requests for 3G service which are not in PDP active state.
Duplicate TI	Total number of duplicate context activation requests for 3G service which are not in PDP active state with duplicate transaction identifiers (TIs).
Duplicate NSAPI	Total number of duplicate context activation requests for 3G service which are not in PDP active state with duplicate Network Service Access Point Identifier (NSAPI).
Duplicate PDP-Addr and APN	Total number of duplicate context activation requests for 3G service which are not in PDP active state with duplicate PDP address and access point name.
2G-Dup Req In NOT PDP-ACTIVE State	Indicates the statistics of duplicate context activation requests for 2G service which are not in PDP active state.
Duplicate TI	Total number of duplicate context activation requests for 2G service which are not in PDP active state with duplicate transaction identifiers (TIs).
Duplicate NSAPI	Total number of duplicate context activation requests for 2G service which are not in PDP active state with duplicate Network Service Access Point Identifier (NSAPI).
Duplicate PDP-Addr and APN	Total number of duplicate context activation requests for 2G service which are not in PDP active state with duplicate PDP address and access point name.

Field	Description
Request Pdp Context Activation	Indicates the statistics of PDP context activation requests for 2G and 3G service.
Total-Request-Pdp-Ctxt-Req	Total number of PDP context activation requests received for 2G and 3G service.
3G-Request-Pdp-Ctxt-Req	Total number of PDP context activation requests received for 3G service.
2G-Request-Pdp-Ctxt-Req	Total number of PDP context activation requests received for 2G service.
Retransmission	Indicates the statistics of PDP context activation requests retransmitted for 2G and 3G service.
Total-Request-Pdp-Ctxt-Req	Total number of PDP context activation requests retransmitted for 2G and 3G service.
3G-Request-Pdp-Ctxt-Req	Total number of PDP context activation requests retransmitted for 3G service.
2G-Request-Pdp-Ctxt-Req	Total number of PDP context activation requests retransmitted for 2G service.
Request Pdp Context Activation Reject	Indicates the statistics of PDP context activation requests rejected for 2G and 3G service.
Total-Request-Pdp-Ctxt-Reject	Total number of PDP context activation requests rejected for 2G and 3G service.
3G-Request-Pdp-Ctxt-Reject	Total number of PDP context activation requests rejected for 3G service.
2G-Request-Pdp-Ctxt-Reject	Total number of PDP context activation requests rejected for 2G service.
Request Pdp Context Activation Denied	Indicates the statistics of PDP context activation requests Denied for 2G and 3G service.
3G-Insufficient Resources	Total PDP context activation requests denied due to insufficient resources in 3G service.
2G-Insufficient Resources	Total PDP context activation requests denied due to insufficient resources in 2G service.
3G-Actv Rej Unspecified	Total PDP context activation requests denied due to unspecified reasons in 3G service.
2G-Actv Rej Unspecified	Total PDP context activation requests denied due to unspecified reasons in 2G service.
3G-Feature Not Supported	Total PDP context activation requests denied due to requested feature not supported in 3G service.
2G-Feature Not Supported	Total PDP context activation requests denied due to requested feature not supported in 2G service.
3G-Svc Opt Tmp Out of Order	Total PDP context activation requests denied due to service option was temporarily out of order in 3G service.
2G-Svc Opt Tmp Out of Order	Total PDP context activation requests denied due to service option was temporarily out of order in 2G service.
Modify Context Request	Indicates the statistics of MS and network initiated PDP context modification requests received for 2G and 3G service.
Total-Modify-Request	Total number of MS and network initiated PDP context modification requests received for 2G and 3G service.
3G-Modify-Request	Total number of MS and network initiated PDP context modification requests received for 3G service.
2G-Modify Request	Total number of MS and network initiated PDP context modification requests received for 2G service.

Field	Description
Modify-Request Rx	Total number of MS initiated PDP context modification requests received for 2G and 3G service.
3G-Modify-Request Rx	Total number of MS initiated PDP context modification requests received for 3G service.
2G-Modify-Request Rx	Total number of MS initiated PDP context modification requests received for 2G service.
Modify-Request Tx	Total number of network initiated PDP context modification requests received for 2G and 3G service.
3G-Modify-Request Tx	Total number of network initiated PDP context modification requests received for 3G service.
2G-Modify-Request Tx	Total number of network initiated PDP context modification requests received for 2G service.
Retransmission	Indicates the statistics of network initiated PDP context modification requests retransmitted for 2G and 3G service.
Total-Modify-Request Tx	Total number of network initiated PDP context modification requests retransmitted for 2G and 3G service.
3G-Modify-Request Tx	Total number of network initiated PDP context modification requests retransmitted for 3G service.
2G-Modify-Request Tx	Total number of network initiated PDP context modification requests retransmitted for 2G service.
Modify Context Accept	Indicates the statistics of MS and network initiated PDP context modification requests accepted for 2G and 3G service.
Total-Modify-Accept	Total number of MS and network initiated PDP context modification requests accepted for 2G and 3G service.
3G-Modify-Accept	Total number of MS and network initiated PDP context modification requests accepted for 3G service.
2G-Modify-Accept	Total number of MS and network initiated PDP context modification requests accepted for 2G service.
Modify-Accept Tx	Total number of MS initiated PDP context modification requests accepted for 2G and 3G service.
3G-Modify-Accept Tx	Total number of MS initiated PDP context modification requests accepted for 3G service.
2G-Modify-Accept Tx	Total number of MS initiated PDP context modification requests accepted for 2G service.
Modify-Accept Rx	Total number of network initiated PDP context modification requests accepted for 2G and 3G service.
3G-Modify-Accept Rx	Total number of network initiated PDP context modification requests received for 3G service.
2G-Modify-Accept Rx	Total number of network initiated PDP context modification requests accepted for 2G service.
Modify Context Reject	Indicates the statistics of MS and network initiated PDP context modification requests rejected for 2G and 3G service.
Total-Modify-Reject	Total number of MS and network initiated PDP context modification requests rejected for 2G and 3G service.
3G-Modify-Reject	Total number of MS and network initiated PDP context modification requests rejected for 3G service.

Field	Description
2G-Modify-Reject	Total number of MS and network initiated PDP context modification requests rejected for 2G service.
Modify-Reject Tx	Total number of MS initiated PDP context modification requests rejected for 2G and 3G service.
3G-Modify-Reject Tx	Total number of MS initiated PDP context modification requests rejected for 3G service.
2G-Modify-Reject Tx	Total number of MS initiated PDP context modification requests rejected for 2G service.
Modify-Reject Rx	Total number of network initiated PDP context modification requests rejected for 2G and 3G service.
3G-Modify-Reject Rx	Total number of network initiated PDP context modification requests rejected for 3G service.
2G-Modify-Reject Rx	Total number of network initiated PDP context modification requests rejected for 2G service.
Modify PDP Context Denied Tx	Indicates the reasons for denying MS initiated PDP context modifications for 2G and 3G services.
3G-Insufficient Resources	Total number of MS initiated requests to modify PDP context for 3G service rejected due to insufficient resources.
2G-Insufficient Resources	Total number of MS initiated requests to modify PDP context for 3G service rejected due to insufficient resources.
3G-Svc Option Not Supported	Total number of MS initiated requests to modify PDP context for 3G service rejected as requested service option is not supported.
2G-Svc Option Not Supported	Total number of MS initiated requests to modify PDP context for 2G service rejected as requested service option is not supported.
3G-Sem Err in TFT OP	Total number of MS initiated requests to modify PDP context for 3G service rejected due to semantic error in subscriber traffic flow template operation.
2G-Sem Err in TFT OP	Total number of MS initiated requests to modify PDP context for 2G service rejected due to semantic error in subscriber traffic flow template operation.
3G-Syntactic Err in TFT OP	Total number of MS initiated requests to modify PDP context for 3G service rejected due to syntax error in subscriber traffic flow template operation.
2G-Syntactic Err in TFT OP	Total number of MS initiated requests to modify PDP context for 2G service rejected due to syntax error in subscriber traffic flow template operation.
3G-Sem Err in Pkt Filter	Total number of MS initiated requests to modify PDP context for 3G service rejected due to semantic error in packet filter.
2G-Sem Err in Pkt Filter	Total number of MS initiated requests to modify PDP context for 2G service rejected due to semantic error in packet filter.
3G-Syntactic Err in Pkt Filter	Total number of MS initiated requests to modify PDP context for 3G service rejected due to syntax error in packet filter.
2G-Syntactic Err in Pkt Filter	Total number of MS initiated requests to modify PDP context for 2G service rejected due to syntax error in packet filter.
3G-Sem Incorrect Msg	Total number of MS initiated requests to modify PDP context for 3G service rejected due to semantically incorrect message.
2G-Sem Incorrect Msg	Total number of MS initiated requests to modify PDP context for 2G service rejected due to semantically incorrect message.

Field	Description
3G-InvalidMandatory Info	Total number of MS initiated requests to modify PDP context for 3G service rejected as mandatory information in message is invalid.
2G-InvalidMandatory Info	Total number of MS initiated requests to modify PDP context for 2G service rejected as mandatory information in message is invalid.
3G-Msg Non Existent	Total number of MS initiated requests to modify PDP context for 3G service rejected due to non-existent type of message.
2G-Msg Non Existent	Total number of MS initiated requests to modify PDP context for 2G service rejected due to non-existent type of message.
3G-IE Non Existent	Total number of MS initiated requests to modify PDP context for 3G service rejected due to non-existence of information element.
2G-IE Non Existent	Total number of MS initiated requests to modify PDP context for 2G service rejected due to non-existence of information element.
3G-Conditional IE Error	Total number of MS initiated requests to modify PDP context for 3G service rejected due to error in conditional information element.
2G-Conditional IE Error	Total number of MS initiated requests to modify PDP context for 2G service rejected due to error in conditional information element.
3G-Msg Not Compatible with State	Total number of MS initiated requests to modify PDP context for 3G service rejected as message type is not compatible with protocol state.
2G-Msg Not Compatible with State	Total number of MS initiated requests to modify PDP context for 2G service rejected as message type is not compatible with protocol state.
3G-Recovery on Timer Expiry	Total number of MS initiated requests to modify PDP context for 3G service rejected as timer expired for recovery.
2G-Recovery on Timer Expiry	Total number of MS initiated requests to modify PDP context for 2G service rejected as timer expired for recovery.
3G-Proto Err Unspecified	Total number of MS initiated requests to modify PDP context for 3G service rejected due to unspecified protocol error.
2G-Proto Err Unspecified	Total number of MS initiated requests to modify PDP context for 2G service rejected due to unspecified protocol error.
Modify PDP Context Rx	Indicates the statistics of reason to deny SGSN initiated PDP context modification for 2G and 3G service denied.
3G-InsufficientResources	Total number of SGSN initiated requests received to modify PDP context for 3G service rejected due to insufficient resources.
2G-InsufficientResources	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to insufficient resources.
3G-Svc Option Not Supported	Total number of SGSN initiated requests to modify PDP context for 3G service rejected as requested service option is not supported.
2G-Svc Option Not Supported	Total number of SGSN initiated requests to modify PDP context for 2G service rejected as requested service option is not supported.
3G-Sem Err in TFT OP	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to semantic error in subscriber traffic flow template operation.

Field	Description
2G-Sem Err in TFT OP	Total number of SGSN initiated requests to modify PDP context for 2G service rejected due to semantic error in subscriber traffic flow template operation.
3G-Syntactic Err in TFT OP	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to syntax error in subscriber traffic flow template operation.
2G-Syntactic Err in TFT OP	Total number of SGSN initiated requests to modify PDP context for 2G service rejected due to syntax error in subscriber traffic flow template operation.
3G-Sem Err in Pkt Filter	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to semantic error in packet filter.
2G-Sem Err in Pkt Filter	Total number of SGSN initiated requests to modify PDP context for 2G service rejected due to semantic error in packet filter.
3G-Syntactic Err in Pkt Filter	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to syntax error in packet filter.
2G-Syntactic Err in Pkt Filter	Total number of SGSN initiated requests to modify PDP context for 2G service rejected due to syntax error in packet filter.
3G-Sem Incorrect Msg	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to semantically incorrect message.
2G-Sem Incorrect Msg	Total number of SGSN initiated requests to modify PDP context for 2G service rejected due to semantically incorrect message.
3G-Invalid Mandatory Info	Total number of SGSN initiated requests to modify PDP context for 3G service rejected as mandatory information in message is invalid.
2G-Invalid Mandatory Info	Total number of SGSN initiated requests to modify PDP context for 2G service rejected as mandatory information in message is invalid.
3G-Msg Non Existent	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to non-existent type of message.
2G-Msg Non Existent	Total number of SGSN initiated requests to modify PDP context for 2G service rejected due to non-existent type of message.
3G-IE Non Existent	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to non-existence of information element.
2G-IE Non Existent	Total number of SGSN initiated requests to modify PDP context for 2G service rejected due to non-existence of information element.
3G-Conditional IE Error	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to error in conditional information element.
2G-Conditional IE Error	Total number of SGSN initiated requests to modify PDP context for 2G service rejected due to error in conditional information element.
3G-Msg Not Compatible with State	Total number of SGSN initiated requests to modify PDP context for 3G service rejected as message type is not compatible with protocol state.
2G-Msg Not Compatible with State	Total number of SGSN initiated requests to modify PDP context for 2G service rejected as message type is not compatible with protocol state.
3G-Recovery on Timer Expiry	Total number of SGSN initiated requests to modify PDP context for 3G service rejected as timer expired for recovery.

Field	Description
2G-Recovery on Timer Expiry	Total number of SGSN initiated requests to modify PDP context for 2G service rejected as timer expired for recovery.
3G-Proto Err Unspecified	Total number of SGSN initiated requests to modify PDP context for 3G service rejected due to unspecified protocol error.
2G-Proto Err Unspecified	Total number of SGSN initiated requests to modify PDP context for 2G service rejected due to unspecified protocol error.
Deactivate Context Request	Indicates the statistics of MS and network initiated PDP context deactivation requests received for 2G and 3G service.
Total-Deactiv-Request	Total number of MS and network initiated PDP context deactivation requests received for 2G and 3G service.
3G-Deactiv-Request	Total number of MS and network initiated PDP context deactivation requests received for 3G service.
2G-Deactiv-Request	Total number of MS and network initiated PDP context deactivation requests received for 2G service.
MS-Deactiv-Request	Total number of MS initiated PDP context deactivation requests received for 2G and 3G service.
3G-MS-Deactiv-Request	Total number of MS initiated PDP context deactivation requests received for 3G service.
2G-MS-Deactiv-Request	Total number of MS initiated PDP context deactivation requests received for 2G service.
SGSN-Deactiv-Request	Total number of SGSN initiated PDP context deactivation requests received for 2G and 3G service.
3G-SGSN-Deactiv-Request	Total number of SGSN initiated PDP context deactivation requests received for 3G service.
2G-SGSN-Deactiv-Request	Total number of SGSN initiated PDP context deactivation requests received for 2G service.
HLR-Deactiv-Request	Total number of home location register (HLR) initiated PDP context deactivation requests received for 2G and 3G service.
3G-HLR-Deactiv-Request	Total number of HLR initiated PDP context deactivation requests received for 3G service.
2G-HLR-Deactiv-Request	Total number of HLR initiated PDP context deactivation requests received for 2G service.
GGSN-Deactiv-Request	Total number of GGSN initiated PDP context deactivation requests received for 2G and 3G service.
3G-GGSN-Deactiv-Request	Total number of GGSN initiated PDP context deactivation requests received for 3G service.
2G-GGSN-Deactiv-Request	Total number of GGSN initiated PDP context deactivation requests received for 2G service.
Retransmission	Indicates the statistics of network initiated PDP context deactivation requests retransmitted for 2G and 3G service
Total-SGSN-Deactiv-Request	Total number of SGSN initiated PDP context deactivation requests retransmitted for 2G and 3G service.
3G-SGSN-Deactiv-Request	Total number of SGSN initiated PDP context deactivation requests retransmitted for 3G service.
2G-SGSN-Deactiv-Request	Total number of SGSN initiated PDP context deactivation requests retransmitted for 2G service.
Total-HLR-Deactiv-Request	Total number of home location register (HLR) initiated PDP context deactivation requests retransmitted for 2G and 3G service.

Field	Description
3G-HLR-Deactiv-Request	Total number of HLR initiated PDP context deactivation requests retransmitted for 3G service.
2G-HLR-Deactiv-Request	Total number of HLR initiated PDP context deactivation requests retransmitted for 2G service.
Total-GGSN-Deactiv-Request	Total number of GGSN initiated PDP context deactivation requests retransmitted for 2G and 3G service.
3G-GGSN-Deactiv-Request	Total number of GGSN initiated PDP context deactivation requests retransmitted for 3G service.
2G-GGSN-Deactiv-Request	Total number of GGSN initiated PDP context deactivation requests retransmitted for 2G service.
Deactivate Context Accept	Indicates the statistics of MS and network initiated PDP context deactivation requests accepted for 2G and 3G service.
Total-Deactiv-Accept	Total number of MS and network initiated PDP context deactivation requests accepted for 2G and 3G service.
3G-Deactiv-Accept	Total number of MS and network initiated PDP context deactivation requests accepted for 3G service.
2G-Deactiv-Accept	Total number of MS and network initiated PDP context deactivation requests accepted for 2G service.
MS-Deactiv-Accept	Total number of MS initiated PDP context deactivation requests accepted for 2G and 3G service.
3G-MS-Deactiv-Accept	Total number of MS initiated PDP context deactivation requests accepted for 3G service.
2G-MS-Deactiv-Accept	Total number of MS initiated PDP context deactivation requests accepted for 2G service.
SGSN-Deactiv-Accept	Total number of SGSN initiated PDP context deactivation requests accepted for 2G and 3G service.
3G-SGSN-Deactiv-Accept	Total number of SGSN initiated PDP context deactivation requests accepted for 3G service.
2G-SGSN-Deactiv-Accept	Total number of SGSN initiated PDP context deactivation requests accepted for 2G service.
HLR-Deactiv-Accept	Total number of home location register (HLR) initiated PDP context deactivation requests accepted for 2G and 3G service.
3G-HLR-Deactiv-Accept	Total number of HLR initiated PDP context deactivation requests accepted for 3G service.
2G-HLR-Deactiv-Accept	Total number of HLR initiated PDP context deactivation requests accepted for 2G service.
GGSN-Deactiv-Accept	Total number of GGSN initiated PDP context deactivation requests accepted for 2G and 3G service.
3G-GGSN-Deactiv-Accept	Total number of GGSN initiated PDP context deactivation requests accepted for 3G service.
2G-GGSN-Deactiv-Accept	Total number of GGSN initiated PDP context deactivation requests accepted for 2G service.
Deactivation Causes Rx	This group displays the statistics of PDP context deactivation causes received by SGSN.
3G-Barred Due to ODB	The PDP contexts deactivated due to operator determined barring in 3G service network.
2G-Barred Due to ODB	The PDP contexts deactivated due to operator determined barring in 2G service network.
3G-Mbms Cap Insufficient Svc	The PDP contexts deactivated due to insufficient capacity for MBMS service in 3G service network.
2G-Mbms Cap Insufficient Svc	The PDP contexts deactivated due to insufficient capacity for MBMS service in 2G service network.

Field	Description
3G-Llc Or Sndcp Failure GB Mode	The PDP contexts deactivated due to failure of Logical Link Control or Sub Network Dependent Convergence Protocol (SNDCP) on Gb interface in 3G service network.
2G-Llc Or Sndcp Failure GB Mode	The PDP contexts deactivated due to failure of Logical Link Control or Sub Network Dependent Convergence Protocol (SNDCP) on Gb interface in 2G service network.
3G-Insufficient Resources	The PDP contexts deactivated due to insufficient resources in 3G service network.
2G-Insufficient Resources	The PDP contexts deactivated due to insufficient resources in 2G service network.
3G-Missing Or Unknown Apn	The PDP contexts deactivated due to unknown or missing APN in 3G service network.
2G-Missing Or Unknown Apn	The PDP contexts deactivated due to unknown or missing APN in 2G service network.
3G-Unknown Pdp Add Or Pdp Type	The PDP contexts deactivated due to unknown PDP context address or PDP context type in 3G service network.
2G-Unknown Pdp Add Or Pdp Type	The PDP contexts deactivated due to unknown PDP context address or PDP context type in 2G service network.
3G-User Auth Failed	The PDP contexts deactivated due to user authentication failure in 3G service network.
2G-User Auth Failed	The PDP contexts deactivated due to user authentication failure in 2G service network.
3G-Actv Rej By Ggsn	The PDP contexts deactivated as PDP context activation rejected by GGSN in 3G service network.
2G-Actv Rej By Ggsn	The PDP contexts deactivated as PDP context activation rejected by GGSN in 2G service network.
3G-Actv Rej Unspecified	The PDP contexts deactivated as PDP context activation rejection was not specified by network in 3G service network.
2G-Actv Rej Unspecified	The PDP contexts deactivated as PDP context activation rejection was not specified by network in 2G service network.
3G-Svc Option Not Supported	The PDP contexts deactivated as service option was not supported in 3G service network.
2G-Svc Option Not Supported	The PDP contexts deactivated as service option was not supported in 2G service network.
3G-Req Svc Option Not Subscribed	The PDP contexts deactivated as requested service option was not subscribed by respective subscriber in 3G service network.
2G-Req Svc Option Not Subscribed	The PDP contexts deactivated as requested service option was not subscribed by respective subscriber in 2G service network.
3G-Svc Option Tmp Out Of Order	The PDP contexts deactivated as requested service option was temporarily out of order or not available in 3G service network.
2G-Svc Option Tmp Out Of Order	The PDP contexts deactivated as requested service option was temporarily out of order or not available in 2G service network.
3G-Nsapi Already Used	The PDP contexts deactivated as requested Network Service Access Point Identifier (NSAPI) was already used in 3G service network.
2G-Nsapi Already Used	The PDP contexts deactivated as requested Network Service Access Point Identifier (NSAPI) was already used in 2G service network.
3G-Regular Deactv	The PDP contexts deactivated due to periodic deactivation in 3G service network.
2G-Regular Deactv	The PDP contexts deactivated due to periodic deactivation in 2G service network.

Field	Description
3G-Qos Not Accepted	The PDP contexts deactivated as requested QoS for session was not accepted by system in 3G service network.
2G-Qos Not Accepted	The PDP contexts deactivated as requested QoS for session was not accepted by system in 2G service network.
3G-Network Failure	The PDP contexts deactivated due to network failure in 3G service network.
2G-Network Failure	The PDP contexts deactivated due to network failure in 2G service network.
3G-Reactv Required	The PDP contexts deactivated as reactivation was required for PDP context in 3G service network.
2G-Reactv Required	The PDP contexts deactivated as reactivation was required for PDP context in 2G service network.
3G-Feature Not Supported	The PDP contexts deactivated as requested feature was not supported in 3G service network.
2G-Feature Not Supported	The PDP contexts deactivated as requested feature was not supported in 2G service network.
3G-Sem Error In The Tft Op	The PDP contexts deactivated due to semantic error in traffic flow template options in 3G service network.
2G-Sem Error In The Tft Op	The PDP contexts deactivated due to semantic error in traffic flow template options in 2G service network.
3G-Synt Error In The Tft Op	The PDP contexts deactivated due to syntax error in traffic flow template options in 3G service network.
2G-Synt Error In The Tft Op	The PDP contexts deactivated due to syntax error in traffic flow template options in 2G service network.
3G-Unknown Ctx	The PDP contexts deactivated due to unknown PDP context in 3G service network.
2G-Unknown Ctx	The PDP contexts deactivated due to unknown PDP context in 2G service network.
3G-Ctx No-Tft Already Activated	The PDP contexts deactivated as no PDP context was available for activated TFT in 3G service network.
2G-Ctx No-Tft Already Activated	The PDP contexts deactivated as no PDP context was available for activated TFT in 2G service network.
3G-M-Cast Grp Membership Time Out	The PDP contexts deactivated due to timeout in multicast group membership for particular subscriber in 3G service network.
2G-M-Cast Grp Membership Time Out	The PDP contexts deactivated due to timeout in multicast group membership for particular subscriber in 2G service network.
3G-Sem Errors In Pkt Filter	The PDP contexts deactivated due to semantic error in packet filter in 3G service network.
2G-Sem Errors In Pkt Filter	The PDP contexts deactivated due to semantic error in packet filter in 2G service network.
3G-Synt Errors In Pkt Filter	The PDP contexts deactivated due to syntax error in packet filter in 3G service network.
2G-Synt Errors In Pkt Filter	The PDP contexts deactivated due to syntax error in packet filter in 2G service network.
3G-Invalid Transaction Id Val	The PDP contexts deactivated due to invalid transaction id value in message in 3G service network.
2G-Invalid Transaction Id Val	The PDP contexts deactivated due to invalid transaction id value in message in 2G service network.

Field	Description
3G-Sem Incorrect Msg	The PDP contexts deactivated due to semantically incorrect message in 3G service network.
2G-Sem Incorrect Msg	The PDP contexts deactivated due to semantically incorrect message in 2G service network.
3G-Invalid Mandatory Info	The PDP contexts deactivated due to invalid information in mandatory field of message in 3G service network.
2G-Invalid Mandatory Info	The PDP contexts deactivated due to invalid information in mandatory field of message in 2G service network.
3G-Msg Non Existent	The PDP contexts deactivated due to non-existent type of message received in 3G service network.
2G-Msg Non Existent	The PDP contexts deactivated due to non-existent type of message received in 2G service network.
3G-Ie Non Existent	The PDP contexts deactivated due to non-existent type of information element received in 3G service network.
2G-Ie Non Existent	The PDP contexts deactivated due to non-existent type of information element received in 2G service network.
3G-Conditional Ie Error	The PDP contexts deactivated due to error in conditional information element received in 3G service network.
2G-Conditional Ie Error	The PDP contexts deactivated due to error in conditional information element received in 2G service network.
3G-Proto Err Unspecified	The PDP contexts deactivated due to unspecified protocol error in message received in 3G service network.
2G-Proto Err Unspecified	The PDP contexts deactivated due to unspecified protocol error in message received in 2G service network.
3G-Apn Restr val Incomp With Ctx	The PDP contexts deactivated due as APN restore value was incompatible with PDP context in 3G service network.
2G-Apn Restr val Incomp With Ctx	The PDP contexts deactivated due as APN restore value was incompatible with PDP context in 2G service network.
3G-Msg Not Comp With State	The PDP contexts deactivated due as received message was incompatible with session state in 3G service network.
2G-Msg Not Comp With State	The PDP contexts deactivated due as received message was incompatible with session state in 2G service network.
3G-Recovery On Timer Expiry	The PDP contexts deactivated due recovery of context started after expiry of deactivation timer 3G service network.
2G-Recovery On Timer Expiry	The PDP contexts deactivated due recovery of context started after expiry of deactivation timer 2G service network.
Deactivation Causes Tx	This group displays the statistics of PDP context deactivation causes sent by SGSN.
3G-Barred Due to ODB	The PDP contexts deactivated due to operator determined barring in 3G service network.
2G-Barred Due to ODB	The PDP contexts deactivated due to operator determined barring in 2G service network.
3G-Mbms Cap Insufficient Svc	The PDP contexts deactivated due to insufficient capacity for MBMS service in 3G service network.

Field	Description
2G-Mbms Cap Insufficient Svc	The PDP contexts deactivated due to insufficient capacity for MBMS service in 2G service network.
3G-Llc Or Sndcp Failure GB Mode	The PDP contexts deactivated due to failure of Logical Link Control or Sub Network Dependent Convergence Protocol (SND CP) on Gb interface in 3G service network.
2G-Llc Or Sndcp Failure GB Mode	The PDP contexts deactivated due to failure of Logical Link Control or Sub Network Dependent Convergence Protocol (SND CP) on Gb interface in 2G service network.
3G-Insufficient Resources	The PDP contexts deactivated due to insufficient resources in 3G service network.
2G-Insufficient Resources	The PDP contexts deactivated due to insufficient resources in 2G service network.
3G-Missing Or Unknown Apn	The PDP contexts deactivated due to unknown or missing APN in 3G service network.
2G-Missing Or Unknown Apn	The PDP contexts deactivated due to unknown or missing APN in 2G service network.
3G-Unknown Pdp Add Or Pdp Type	The PDP contexts deactivated due to unknown PDP context address or PDP context type in 3G service network.
2G-Unknown Pdp Add Or Pdp Type	The PDP contexts deactivated due to unknown PDP context address or PDP context type in 2G service network.
3G-User Auth Failed	The PDP contexts deactivated due to user authentication failure in 3G service network.
2G-User Auth Failed	The PDP contexts deactivated due to user authentication failure in 2G service network.
3G-Actv Rej By Ggsn	The PDP contexts deactivated as PDP context activation rejected by GGSN in 3G service network.
2G-Actv Rej By Ggsn	The PDP contexts deactivated as PDP context activation rejected by GGSN in 2G service network.
3G-Actv Rej Unspecified	The PDP contexts deactivated as PDP context activation rejection was not specified by network in 3G service network.
2G-Actv Rej Unspecified	The PDP contexts deactivated as PDP context activation rejection was not specified by network in 2G service network.
3G-Svc Option Not Supported	The PDP contexts deactivated as service option was not supported in 3G service network.
2G-Svc Option Not Supported	The PDP contexts deactivated as service option was not supported in 2G service network.
3G-Req Svc Option Not Subscribed	The PDP contexts deactivated as requested service option was not subscribed by respective subscriber in 3G service network.
2G-Req Svc Option Not Subscribed	The PDP contexts deactivated as requested service option was not subscribed by respective subscriber in 2G service network.
3G-Svc Option Tmp Out Of Order	The PDP contexts deactivated as requested service option was temporarily out of order or not available in 3G service network.
2G-Svc Option Tmp Out Of Order	The PDP contexts deactivated as requested service option was temporarily out of order or not available in 2G service network.
3G-Nsapi Already Used	The PDP contexts deactivated as requested Network Service Access Point Identifier (NSAPI) was already used in 3G service network.
2G-Nsapi Already Used	The PDP contexts deactivated as requested Network Service Access Point Identifier (NSAPI) was already used in 2G service network.

Field	Description
3G-Regular Deactiv	The PDP contexts deactivated due to periodic deactivation in 3G service network.
2G-Regular Deactiv	The PDP contexts deactivated due to periodic deactivation in 2G service network.
3G-Qos Not Accepted	The PDP contexts deactivated as requested QoS for session was not accepted by system in 3G service network.
2G-Qos Not Accepted	The PDP contexts deactivated as requested QoS for session was not accepted by system in 2G service network.
3G-Network Failure	The PDP contexts deactivated due to network failure in 3G service network.
2G-Network Failure	The PDP contexts deactivated due to network failure in 2G service network.
3G-Reactiv Required	The PDP contexts deactivated as reactivation was required for PDP context in 3G service network.
2G-Reactiv Required	The PDP contexts deactivated as reactivation was required for PDP context in 2G service network.
3G-Feature Not Supported	The PDP contexts deactivated as requested feature was not supported in 3G service network.
2G-Feature Not Supported	The PDP contexts deactivated as requested feature was not supported in 2G service network.
3G-Sem Error In The Tft Op	The PDP contexts deactivated due to semantic error in traffic flow template options in 3G service network.
2G-Sem Error In The Tft Op	The PDP contexts deactivated due to semantic error in traffic flow template options in 2G service network.
3G-Synt Error In The Tft Op	The PDP contexts deactivated due to syntax error in traffic flow template options in 3G service network.
2G-Synt Error In The Tft Op	The PDP contexts deactivated due to syntax error in traffic flow template options in 2G service network.
3G-Unknown Ctx	The PDP contexts deactivated due to unknown PDP context in 3G service network.
2G-Unknown Ctx	The PDP contexts deactivated due to unknown PDP context in 2G service network.
3G-Ctx No-Tft Already Activated	The PDP contexts deactivated as no PDP context was available for activated TFT in 3G service network.
2G-Ctx No-Tft Already Activated	The PDP contexts deactivated as no PDP context was available for activated TFT in 2G service network.
3G-M-Cast Grp Membership Time Out	The PDP contexts deactivated due to timeout in multicast group membership for particular subscriber in 3G service network.
2G-M-Cast Grp Membership Time Out	The PDP contexts deactivated due to timeout in multicast group membership for particular subscriber in 2G service network.
3G-Sem Errors In Pkt Filter	The PDP contexts deactivated due to semantic error in packet filter in 3G service network.
2G-Sem Errors In Pkt Filter	The PDP contexts deactivated due to semantic error in packet filter in 2G service network.
3G-Synt Errors In Pkt Filter	The PDP contexts deactivated due to syntax error in packet filter in 3G service network.
2G-Synt Errors In Pkt Filter	The PDP contexts deactivated due to syntax error in packet filter in 2G service network.

Field	Description
3G-Invalid Transaction Id Val	The PDP contexts deactivated due to invalid transaction id value in message in 3G service network.
2G-Invalid Transaction Id Val	The PDP contexts deactivated due to invalid transaction id value in message in 2G service network.
3G-Sem Incorrect Msg	The PDP contexts deactivated due to semantically incorrect message in 3G service network.
2G-Sem Incorrect Msg	The PDP contexts deactivated due to semantically incorrect message in 2G service network.
3G-Invalid Mandatory Info	The PDP contexts deactivated due to invalid information in mandatory field of message in 3G service network.
2G-Invalid Mandatory Info	The PDP contexts deactivated due to invalid information in mandatory field of message in 2G service network.
3G-Msg Non Existent	The PDP contexts deactivated due to non-existent type of message received in 3G service network.
2G-Msg Non Existent	The PDP contexts deactivated due to non-existent type of message received in 2G service network.
3G-Ie Non Existent	The PDP contexts deactivated due to non-existent type of information element received in 3G service network.
2G-Ie Non Existent	The PDP contexts deactivated due to non-existent type of information element received in 2G service network.
3G-Conditional Ie Error	The PDP contexts deactivated due to error in conditional information element received in 3G service network.
2G-Conditional Ie Error	The PDP contexts deactivated due to error in conditional information element received in 2G service network.
3G-Proto Err Unspecified	The PDP contexts deactivated due to unspecified protocol error in message received in 3G service network.
2G-Proto Err Unspecified	The PDP contexts deactivated due to unspecified protocol error in message received in 2G service network.
3G-Apn Restr val Incomp With Ctx	The PDP contexts deactivated due as APN restore value was incompatible with PDP context in 3G service network.
2G-Apn Restr val Incomp With Ctx	The PDP contexts deactivated due as APN restore value was incompatible with PDP context in 2G service network.
3G-Msg Not Comp With State	The PDP contexts deactivated due as received message was incompatible with session state in 3G service network.
2G-Msg Not Comp With State	The PDP contexts deactivated due as received message was incompatible with session state in 2G service network.
3G-Recovery On Timer Expiry	The PDP contexts deactivated due recovery of context started after expiry of deactivation timer 3G service network.
2G-Recovery On Timer Expiry	The PDP contexts deactivated due recovery of context started after expiry of deactivation timer 2G service network.
SM Status Messages	This group displays the statistics of the service manager status messages for 2G and 3G service.

Field	Description
Total-SM-Status-Tx	Total number of service manager status messages sent for 2G and 3G service
3G-SM-Status-Tx	Total number of service manager status messages sent for 3G service
2G-SM-Status-Tx	Total number of service manager status messages sent for 2G service
Total-SM-Status-Rx	Total number of service manager status messages received for 2G and 3G service
3G-SM-Status-Rx	Total number of service manager status messages received for 3G service
2G-SM-Status-Rx	Total number of service manager status messages received for 2G service
SM Status Rcvd Causes	This group displays the statistics of session manager status messages received by SGSN.
3G-Barred Due to ODB	The PDP contexts deactivated due to operator determined barring in 3G service network.
2G-Barred Due to ODB	The PDP contexts deactivated due to operator determined barring in 2G service network.
3G-Mbms Cap Insufficient Svc	The PDP contexts deactivated due to insufficient capacity for MBMS service in 3G service network.
2G-Mbms Cap Insufficient Svc	The PDP contexts deactivated due to insufficient capacity for MBMS service in 2G service network.
3G-Llc Or Sndcp Failure GB Mode	The PDP contexts deactivated due to failure of Logical Link Control or Sub Network Dependent Convergence Protocol (SNDCP) on Gb interface in 3G service network.
2G-Llc Or Sndcp Failure GB Mode	The PDP contexts deactivated due to failure of Logical Link Control or Sub Network Dependent Convergence Protocol (SNDCP) on Gb interface in 2G service network.
3G-Insufficient Resources	The PDP contexts deactivated due to insufficient resources in 3G service network.
2G-Insufficient Resources	The PDP contexts deactivated due to insufficient resources in 2G service network.
3G-Missing Or Unknown Apn	The PDP contexts deactivated due to unknown or missing APN in 3G service network.
2G-Missing Or Unknown Apn	The PDP contexts deactivated due to unknown or missing APN in 2G service network.
3G-Unknown Pdp Add Or Pdp Type	The PDP contexts deactivated due to unknown PDP context address or PDP context type in 3G service network.
2G-Unknown Pdp Add Or Pdp Type	The PDP contexts deactivated due to unknown PDP context address or PDP context type in 2G service network.
3G-User Auth Failed	The PDP contexts deactivated due to user authentication failure in 3G service network.
2G-User Auth Failed	The PDP contexts deactivated due to user authentication failure in 2G service network.
3G-Actv Rej By Ggsn	The PDP contexts deactivated as PDP context activation rejected by GGSN in 3G service network.
2G-Actv Rej By Ggsn	The PDP contexts deactivated as PDP context activation rejected by GGSN in 2G service network.
3G-Actv Rej Unspecified	The PDP contexts deactivated as PDP context activation rejection was not specified by network in 3G service network.
2G-Actv Rej Unspecified	The PDP contexts deactivated as PDP context activation rejection was not specified by network in 2G service network.
3G-Svc Option Not Supported	The PDP contexts deactivated as service option was not supported in 3G service network.

Field	Description
2G-Svc Option Not Supported	The PDP contexts deactivated as service option was not supported in 2G service network.
3G-Req Svc Option Not Subscribed	The PDP contexts deactivated as requested service option was not subscribed by respective subscriber in 3G service network.
2G-Req Svc Option Not Subscribed	The PDP contexts deactivated as requested service option was not subscribed by respective subscriber in 2G service network.
3G-Svc Option Tmp Out Of Order	The PDP contexts deactivated as requested service option was temporarily out of order or not available in 3G service network.
2G-Svc Option Tmp Out Of Order	The PDP contexts deactivated as requested service option was temporarily out of order or not available in 2G service network.
3G-Nsapi Already Used	The PDP contexts deactivated as requested Network Service Access Point Identifier (NSAPI) was already used in 3G service network.
2G-Nsapi Already Used	The PDP contexts deactivated as requested Network Service Access Point Identifier (NSAPI) was already used in 2G service network.
3G-Regular Deactv	The PDP contexts deactivated due to periodic deactivation in 3G service network.
2G-Regular Deactv	The PDP contexts deactivated due to periodic deactivation in 2G service network.
3G-Qos Not Accepted	The PDP contexts deactivated as requested QoS for session was not accepted by system in 3G service network.
2G-Qos Not Accepted	The PDP contexts deactivated as requested QoS for session was not accepted by system in 2G service network.
3G-Network Failure	The PDP contexts deactivated due to network failure in 3G service network.
2G-Network Failure	The PDP contexts deactivated due to network failure in 2G service network.
3G-Reactv Required	The PDP contexts deactivated as reactivation was required for PDP context in 3G service network.
2G-Reactv Required	The PDP contexts deactivated as reactivation was required for PDP context in 2G service network.
3G-Feature Not Supported	The PDP contexts deactivated as requested feature was not supported in 3G service network.
2G-Feature Not Supported	The PDP contexts deactivated as requested feature was not supported in 2G service network.
3G-Sem Error In The Tft Op	The PDP contexts deactivated due to semantic error in traffic flow template options in 3G service network.
2G-Sem Error In The Tft Op	The PDP contexts deactivated due to semantic error in traffic flow template options in 2G service network.
3G-Synt Error In The Tft Op	The PDP contexts deactivated due to syntax error in traffic flow template options in 3G service network.
2G-Synt Error In The Tft Op	The PDP contexts deactivated due to syntax error in traffic flow template options in 2G service network.
3G-Unknown Ctx	The PDP contexts deactivated due to unknown PDP context in 3G service network.
2G-Unknown Ctx	The PDP contexts deactivated due to unknown PDP context in 2G service network.

Field	Description
3G-Ctx No-Tft Already Activated	The PDP contexts deactivated as no PDP context was available for activated TFT in 3G service network.
2G-Ctx No-Tft Already Activated	The PDP contexts deactivated as no PDP context was available for activated TFT in 2G service network.
3G-M-Cast Grp Membership Time Out	The PDP contexts deactivated due to timeout in multicast group membership for particular subscriber in 3G service network.
2G-M-Cast Grp Membership Time Out	The PDP contexts deactivated due to timeout in multicast group membership for particular subscriber in 2G service network.
3G-Sem Errors In Pkt Filter	The PDP contexts deactivated due to semantic error in packet filter in 3G service network.
2G-Sem Errors In Pkt Filter	The PDP contexts deactivated due to semantic error in packet filter in 2G service network.
3G-Synt Errors In Pkt Filter	The PDP contexts deactivated due to syntax error in packet filter in 3G service network.
2G-Synt Errors In Pkt Filter	The PDP contexts deactivated due to syntax error in packet filter in 2G service network.
3G-Invalid Transaction Id Val	The PDP contexts deactivated due to invalid transaction id value in message in 3G service network.
2G-Invalid Transaction Id Val	The PDP contexts deactivated due to invalid transaction id value in message in 2G service network.
3G-Sem Incorrect Msg	The PDP contexts deactivated due to semantically incorrect message in 3G service network.
2G-Sem Incorrect Msg	The PDP contexts deactivated due to semantically incorrect message in 2G service network.
3G-Invalid Mandatory Info	The PDP contexts deactivated due to invalid information in mandatory field of message in 3G service network.
2G-Invalid Mandatory Info	The PDP contexts deactivated due to invalid information in mandatory field of message in 2G service network.
3G-Msg Non Existent	The PDP contexts deactivated due to non-existent type of message received in 3G service network.
2G-Msg Non Existent	The PDP contexts deactivated due to non-existent type of message received in 2G service network.
3G-Msg Type Not Comp With State	The PDP contexts deactivated as message type was not compatible with session state in 3G service network.
2G-Msg Type Not Comp With State	The PDP contexts deactivated as message type was not compatible with session state in 2G service network.
3G-Ie Non Existent	The PDP contexts deactivated due to non-existent type of information element received in 3G service network.
2G-Ie Non Existent	The PDP contexts deactivated due to non-existent type of information element received in 2G service network.
3G-Conditional Ie Error	The PDP contexts deactivated due to error in conditional information element received in 3G service network.
2G-Conditional Ie Error	The PDP contexts deactivated due to error in conditional information element received in 2G service network.

Field	Description
3G-Proto Err Unspecified	The PDP contexts deactivated due to unspecified protocol error in message received in 3G service network.
2G-Proto Err Unspecified	The PDP contexts deactivated due to unspecified protocol error in message received in 2G service network.
3G-Apn Restr val Incomp With Ctx	The PDP contexts deactivated due as APN restore value was incompatible with PDP context in 3G service network.
2G-Apn Restr val Incomp With Ctx	The PDP contexts deactivated due as APN restore value was incompatible with PDP context in 2G service network.
3G-Msg Not Compatible With State	The PDP contexts deactivated due as received message was incompatible with session state in 3G service network.
2G-Msg Not Compatible With State	The PDP contexts deactivated due as received message was incompatible with session state in 2G service network.
3G-Recovery On Timer Expiry	The PDP contexts deactivated due recovery of context started after expiry of deactivation timer 3G service network.
2G-Recovery On Timer Expiry	The PDP contexts deactivated due recovery of context started after expiry of deactivation timer 2G service network.
SM Status Sent Causes	This group displays the statistics of session manager status messages sent by SGSN.
3G-Barred Due to ODB	The PDP contexts deactivated due to operator determined barring in 3G service network.
2G-Barred Due to ODB	The PDP contexts deactivated due to operator determined barring in 2G service network.
3G-Mbms Cap Insufficient Svc	The PDP contexts deactivated due to insufficient capacity for MBMS service in 3G service network.
2G-Mbms Cap Insufficient Svc	The PDP contexts deactivated due to insufficient capacity for MBMS service in 2G service network.
3G-Llc Or Sndcp Failure GB Mode	The PDP contexts deactivated due to failure of Logical Link Control or Sub Network Dependent Convergence Protocol (SND CP) on Gb interface in 3G service network.
2G-Llc Or Sndcp Failure GB Mode	The PDP contexts deactivated due to failure of Logical Link Control or Sub Network Dependent Convergence Protocol (SND CP) on Gb interface in 2G service network.
3G-Insufficient Resources	The PDP contexts deactivated due to insufficient resources in 3G service network.
2G-Insufficient Resources	The PDP contexts deactivated due to insufficient resources in 2G service network.
3G-Missing Or Unknown Apn	The PDP contexts deactivated due to unknown or missing APN in 3G service network.
2G-Missing Or Unknown Apn	The PDP contexts deactivated due to unknown or missing APN in 2G service network.
3G-Unknown Pdp Add Or Pdp Type	The PDP contexts deactivated due to unknown PDP context address or PDP context type in 3G service network.
2G-Unknown Pdp Add Or Pdp Type	The PDP contexts deactivated due to unknown PDP context address or PDP context type in 2G service network.
3G-User Auth Failed	The PDP contexts deactivated due to user authentication failure in 3G service network.
2G-User Auth Failed	The PDP contexts deactivated due to user authentication failure in 2G service network.

Field	Description
3G-Actv Rej By Ggsn	The PDP contexts deactivated as PDP context activation rejected by GGSN in 3G service network.
2G-Actv Rej By Ggsn	The PDP contexts deactivated as PDP context activation rejected by GGSN in 2G service network.
3G-Actv Rej Unspecified	The PDP contexts deactivated as PDP context activation rejection was not specified by network in 3G service network.
2G-Actv Rej Unspecified	The PDP contexts deactivated as PDP context activation rejection was not specified by network in 2G service network.
3G-Svc Option Not Supported	The PDP contexts deactivated as service option was not supported in 3G service network.
2G-Svc Option Not Supported	The PDP contexts deactivated as service option was not supported in 2G service network.
3G-Req Svc Option Not Subscribed	The PDP contexts deactivated as requested service option was not subscribed by respective subscriber in 3G service network.
2G-Req Svc Option Not Subscribed	The PDP contexts deactivated as requested service option was not subscribed by respective subscriber in 2G service network.
3G-Svc Option Tmp Out Of Order	The PDP contexts deactivated as requested service option was temporarily out of order or not available in 3G service network.
2G-Svc Option Tmp Out Of Order	The PDP contexts deactivated as requested service option was temporarily out of order or not available in 2G service network.
3G-Nsapi Already Used	The PDP contexts deactivated as requested Network Service Access Point Identifier (NSAPI) was already used in 3G service network.
2G-Nsapi Already Used	The PDP contexts deactivated as requested Network Service Access Point Identifier (NSAPI) was already used in 2G service network.
3G-Regular Deactiv	The PDP contexts deactivated due to periodic deactivation in 3G service network.
2G-Regular Deactiv	The PDP contexts deactivated due to periodic deactivation in 2G service network.
3G-Qos Not Accepted	The PDP contexts deactivated as requested QoS for session was not accepted by system in 3G service network.
2G-Qos Not Accepted	The PDP contexts deactivated as requested QoS for session was not accepted by system in 2G service network.
3G-Network Failure	The PDP contexts deactivated due to network failure in 3G service network.
2G-Network Failure	The PDP contexts deactivated due to network failure in 2G service network.
3G-Reactiv Required	The PDP contexts deactivated as reactivation was required for PDP context in 3G service network.
2G-Reactiv Required	The PDP contexts deactivated as reactivation was required for PDP context in 2G service network.
3G-Feature Not Supported	The PDP contexts deactivated as requested feature was not supported in 3G service network.
2G-Feature Not Supported	The PDP contexts deactivated as requested feature was not supported in 2G service network.
3G-Sem Error In The Tft Op	The PDP contexts deactivated due to semantic error in traffic flow template options in 3G service network.

Field	Description
2G-Sem Error In The Tft Op	The PDP contexts deactivated due to semantic error in traffic flow template options in 2G service network.
3G-Synt Error In The Tft Op	The PDP contexts deactivated due to syntax error in traffic flow template options in 3G service network.
2G-Synt Error In The Tft Op	The PDP contexts deactivated due to syntax error in traffic flow template options in 2G service network.
3G-Unknown Ctx	The PDP contexts deactivated due to unknown PDP context in 3G service network.
2G-Unknown Ctx	The PDP contexts deactivated due to unknown PDP context in 2G service network.
3G-Ctx No-Tft Already Activated	The PDP contexts deactivated as no PDP context was available for activated TFT in 3G service network.
2G-Ctx No-Tft Already Activated	The PDP contexts deactivated as no PDP context was available for activated TFT in 2G service network.
3G-M-Cast Grp Membership Time Out	The PDP contexts deactivated due to timeout in multicast group membership for particular subscriber in 3G service network.
2G-M-Cast Grp Membership Time Out	The PDP contexts deactivated due to timeout in multicast group membership for particular subscriber in 2G service network.
3G-Sem Errors In Pkt Filter	The PDP contexts deactivated due to semantic error in packet filter in 3G service network.
2G-Sem Errors In Pkt Filter	The PDP contexts deactivated due to semantic error in packet filter in 2G service network.
3G-Synt Errors In Pkt Filter	The PDP contexts deactivated due to syntax error in packet filter in 3G service network.
2G-Synt Errors In Pkt Filter	The PDP contexts deactivated due to syntax error in packet filter in 2G service network.
3G-Invalid Transaction Id Val	The PDP contexts deactivated due to invalid transaction id value in message in 3G service network.
2G-Invalid Transaction Id Val	The PDP contexts deactivated due to invalid transaction id value in message in 2G service network.
3G-Sem Incorrect Msg	The PDP contexts deactivated due to semantically incorrect message in 3G service network.
2G-Sem Incorrect Msg	The PDP contexts deactivated due to semantically incorrect message in 2G service network.
3G-Invalid Mandatory Info	The PDP contexts deactivated due to invalid information in mandatory field of message in 3G service network.
2G-Invalid Mandatory Info	The PDP contexts deactivated due to invalid information in mandatory field of message in 2G service network.
3G-Msg Non Existent	The PDP contexts deactivated due to non-existent type of message received in 3G service network.
2G-Msg Non Existent	The PDP contexts deactivated due to non-existent type of message received in 2G service network.
3G-Msg Type Not Comp With State	The PDP contexts deactivated as message type was not compatible with session state in 3G service network.
2G-Msg Type Not Comp With State	The PDP contexts deactivated as message type was not compatible with session state in 2G service network.

Field	Description
3G-Ie Non Existent	The PDP contexts deactivated due to non-existent type of information element received in 3G service network.
2G-Ie Non Existent	The PDP contexts deactivated due to non-existent type of information element received in 2G service network.
3G-Conditional Ie Error	The PDP contexts deactivated due to error in conditional information element received in 3G service network.
2G-Conditional Ie Error	The PDP contexts deactivated due to error in conditional information element received in 2G service network.
3G-Proto Err Unspecified	The PDP contexts deactivated due to unspecified protocol error in message received in 3G service network.
2G-Proto Err Unspecified	The PDP contexts deactivated due to unspecified protocol error in message received in 2G service network.
3G-Apn Restr val Incomp With Ctx	The PDP contexts deactivated due as APN restore value was incompatible with PDP context in 3G service network.
2G-Apn Restr val Incomp With Ctx	The PDP contexts deactivated due as APN restore value was incompatible with PDP context in 2G service network.
3G-Msg Not Compatible With State	The PDP contexts deactivated due as received message was incompatible with session state in 3G service network.
2G-Msg Not Compatible With State	The PDP contexts deactivated due as received message was incompatible with session state in 2G service network.
3G-Recovery On Timer Expiry	The PDP contexts deactivated due recovery of context started after expiry of deactivation timer 3G service network.
2G-Recovery On Timer Expiry	The PDP contexts deactivated due recovery of context started after expiry of deactivation timer 2G service network.
RNC Initiated RAB Messages	Indicates the statistics of the radio network controller (RNC) initiated radio access bearer (RAB) messages for 2G and 3G service.
Total Rab Mod Requested	Total number of requests for radio access bearer modification initiated by radio network controller.
Num Rab Mod	Total number of RAB modified on requests for modification initiated by radio network controller.
Total Rab Rel Requested	Total number of requests for radio access bearer release initiated by radio network controller.
Num Rab Rel	Total number of RAB modified on requests for release initiated by radio network controller.
SGSN Initiated RAB Messages	Indicates the statistics of the SGSN initiated radio access bearer (RAB) messages for 2G and 3G service.
Total Rab Assign Requested	Total number of SGSN initiated RAB assign requests messages received.
Total Rab Assign Rsp Rcvd	Total number of SGSN initiated RAB assign response messages received.
Rab Setup/Mod Attempted	Total number of SGSN initiated setup and modification attempted for RAB.
Rab Setup/Mod Accepted	Total number of SGSN initiated setup and modification accepted for RAB.

Field	Description
Rab Setup/Mod Timer Expired	Total number of SGSN initiated RAB setup and modification events where procedure timer exhausted.
Rab Setup/Mod Failed	Total number of SGSN initiated RAB setup and modification events failed.
Rab Rel Attempted	Total number of SGSN initiated RAB release procedure attempted.
Rab Rel Accepted	Total number of SGSN initiated RAB release procedure accepted.
Rab Rel Timer Expired	Total number of SGSN initiated RAB release procedure where procedure timer exhausted.
Rab Rel Failed	Total number of SGSN initiated RAB release procedure failed.
Rab Queued	Total number of SGSN initiated RAB messages in queue.
Rab Setup Reattempted (Diff IP)	Total number of SGSN initiated RAB setup reattempted with different IP address.
Total Set/Mod/Rel Rab Rejected	Total number of SGSN initiated RAB setup, modification/release rejected.
RAB Release Reason	This group indicates the statistics of reasons for RAB release.
Pre-Empted RAB Release	Total number of RABs released because SGSN preempted another RAB.
Rab Rel Due to UTRAN	Total number of RAB released due to UTRAN.
UE Radio Connection Lost	Total number of RAB released due to radio connection lost from UE.
Rab Rel Due to Other Reason	Total number of RAB released due to reasons other than listed in this table.
RAB Assignment Denied	This group indicates the statistics of reasons for RAB assignment denial.
Rab Pre Empted	Total number of RAB assignment denied because SGSN preempted another RAB.
Trelocoverall Expiry	Total number of RAB assignment denied because Overall Relocation timer expired.
Trelocprep Expiry	Total number of RAB assignment denied because Relocation Preparation timer expired.
Treloccomplete Expiry	Total number of RAB assignment denied because Relocation Completed timer expired.
Tqueuing Expiry	Total number of RAB assignment denied because Queuing timer expired.
Relocation Triggered	Total number of RAB assignment denied because another relocation procedure triggered.
Unable Establish During Reloc	Total number of RAB assignment denied because RAB failed to establish during relocation as it cannot be supported in the target RNC.
Unknown Target Rnc	Total number of RAB assignment denied because the target RNC is not known to the CN.
Relocation Cancelled	Total number of RAB assignment denied because relocation procedure was cancelled by the UTRAN or the UE.
Successful Relocation	Total number of RAB assignment denied because relocation was completed successfully.
Req Cipher Algo Not Supported	Total number of RAB assignment denied because the UTRAN or the UE is unable to support the requested ciphering and/or integrity protection algorithms.
Conflict Cipher Info	Total number of RAB assignment denied because there was conflict in ciphering information.
Failure In The Radio I/F Proc	Total number of RAB assignment denied because radio interface procedure has failed.

Field	Description
Rel Due To Utran Reason	Total number of RAB assignment denied as RAB release is initiated due to UTRAN generated reason.
User Inactivity	Total number of RAB assignment denied due to user inactivity.
Time Critical Relocation	Total number of RAB assignment denied because relocation is requested for time critical reason.
Req Traffic Class Unavail	Total number of RAB assignment denied because requested traffic class was not available for subscriber or in the RAN.
Invalid Rab Parameters Val	Total number of RAB assignment denied due to invalid value in RAB parameters.
Req Max Bit Rate Unavail	Total number of RAB assignment denied because requested Maximum Bit Rate was not available for downlink or uplink in RAN.
Req Max Bit Rate DL Unavail	Total number of RAB assignment denied because requested Maximum Bit Rate was not available for downlink in RAN.
Req Max Bit Rate For UL Unavail	Total number of RAB assignment denied because requested Maximum Bit Rate was not available for uplink in RAN.
Req G-Bit Rate Unavail	Total number of RAB assignment denied because requested Guaranteed Bit Rate was not available for downlink or uplink in RAN.
Req DL G-Bit Rate Unavail	Total number of RAB assignment denied because requested Guaranteed Bit Rate was not available for downlink in RAN.
Req UL G-Bit Rate Unavail	Total number of RAB assignment denied because requested Guaranteed Bit Rate was not available for uplink in RAN.
Req Trans Delay Not Achievable	Total number of RAB assignment denied because requested transfer delay is not achievable.
Invalid Rab Param Combo	Total number of RAB assignment denied due to invalid RAB parameters combination.
Violation For Sdu Parameters	Total number of RAB assignment denied due to condition violation for SDU parameters.
Violation Traffic Hndl Prio	Total number of RAB assignment denied due to condition violation for traffic handling priority.
Violation For G-Bit Rate	Total number of RAB assignment denied due to condition violation for guaranteed bit rate.
User Plane Ver Unsupported	Total number of RAB assignment denied because requested user plane versions were not supported.
Iu Up Failure	Total number of RAB assignment denied due to failure in Iu user plane.
Trelocalloc Expiry	Total number of RAB assignment denied because Relocation Resource Allocation procedure failed due to expiry of the timer TRELOCALLOC.
Relocation Failure In T-System	Total number of RAB assignment denied because relocation failed due to a failure in target CN/RNC or target system.
Invalid Rab Id	Total number of RAB assignment denied because the RAB ID is unknown in the RNC.
No Remaining Rab	Total number of RAB assignment denied because no RAB is available.
Interaction With Other Proc	Total number of RAB assignment denied because relocation was cancelled due to interaction with other procedure.
Repeated Integrity Check Fail	Total number of RAB assignment denied due to repeated failure in integrity checking.

Field	Description
Req Type Not Supported	Total number of RAB assignment denied because the RNC is not supporting the requested location report type.
Req Superseded	Total number of RAB assignment denied because there was a second request on the same RAB.
Ue Gen Sig Con Rel	Total number of RAB assignment denied due to due to UE generated signalling connection release
Resource Optimisation Reloc	Total number of RAB assignment denied because relocation was requested due to resource optimisation.
Req Info Unavail	Total number of RAB assignment denied because requested information is not available.
Relocation Due to Radio Reason	Total number of RAB assignment denied because relocation was requested due to radio reason.
Reloc Unsupported In T-Rnc	Total number of RAB assignment denied due to relocation failure as relocation was not supported in target RNC or target system.
Directed Retry	Total number of RAB assignment denied because retry was directed from RNC.
Radio Con With Ue Lost	Total number of RAB assignment denied because radio connection was lost with UE.
Rnc Unable Establish All Rfcs	Total number of RAB assignment denied because RNC couldn't establish all RAB subflow combinations indicated within the RAB Parameters IE.
Deciphering Keys Unavail	Total number of RAB assignment denied because RNC is not able to provide requested deciphering keys.
Dedicated Assist Data Unavail	Total number of RAB assignment denied because RNC is not able to successfully deliver the requested dedicated assistance data to the UE.
Reloc Target Not Allowed	Total number of RAB assignment denied because relocation to the indicated target cell is not allowed for the UE in question.
Location Reporting Congestion	Total number of RAB assignment denied as congestion status reported location report.
Reduce Load In Serving Cell	Total number of RAB assignment denied because system was reducing load in service cell.
No Radio Resources In T-Cell	Total number of RAB assignment denied because radio resource was not available in target cell.
Geran Iu Mode Failure	Total number of RAB assignment denied because the GERAN cannot provide an appropriate RAB due to limited capabilities within GERAN.
Acc Rstrd Due To Shared N/w	Total number of RAB assignment denied because access to target system restricted due to shared networks.
Reloc Unsuported Due Puesbin	Total number of RAB assignment denied as the incoming relocation cannot be accepted by the target RNC because of the Provision of UE Specific Behavior Information to Network Entities (PUESBINE) feature.
Traffic T-Cell > S-Cell	Total number of RAB assignment denied because the target cell's traffic load is higher than that in the source cell.
Mbms No Multicast Svc For Ue	Total number of RAB assignment denied because the UE does not have any active multicast service.
Mbms Unknown Ue Id	Total number of RAB assignment denied because the CN does not know the UE or unknown UE identifier.

Field	Description
Mbms Sess Start No Data	Total number of RAB assignment denied because the MBMS Session Start procedure was successfully performed, but the RNC does not have any interested UE.
Mbms Superseded Due To Nnsf	Total number of RAB assignment denied as the MBMS Session Start procedure was rejected because NAS Node Selection Function (NNSF) towards another CN node.
Mbms Ue Linking Already Done	Total number of RAB assignment denied because the UE has already been linked to the given Multicast service.
Mbms Ue De Linking Failure	Total number of RAB assignment denied because the UE had not been linked to the given Multicast service.
Tmgi Unknown	Total number of RAB assignment denied due to requested MBMS action failure because of the indicated Temporary Mobile Group Identity (TMGI) is unknown.
MS Unspecified Failure	Total number of RAB assignment denied due to unspecified failures from UE side.
SRNS Context Transfer Messages	Indicates the statistics of SGSN radio network subsystem context transfer messages.
SRNS Context Req Send	Total number of SGSN radio network subsystem context transfer request messages sent.
SRNS Context Rsp Rcvd	Total number of SGSN radio network subsystem context transfer response messages received.
SRNS Context Req Timer Expired	Total number of events when timer exhausted for SGSN radio network subsystem context transfer request messages.
Total PDP-Ctxt Accepted	Total number of PDP context accepted for SGSN radio network subsystem.
Total PDP-Ctxt Rejected	Total number of PDP context rejected for SGSN radio network subsystem.
SRNS Data Fwd Cmd Send	Total number of SGSN radio network subsystem data forward commands sent.
SRNS Ctxt Req Denied	This group indicates the statistics of reasons for SRNS context request denial.
Rab Pre Empted	Total number of SRNS context request denied because SGSN preempted another RAB.
Treloc overall Expiry	Total number of SRNS context request denied because Overall Relocation timer expired.
Treloc prep Expiry	Total number of SRNS context request denied because Relocation Preparation timer expired.
Treloc complete Expiry	Total number of SRNS context request denied because Relocation Completed timer expired.
Tqueuing Expiry	Total number of SRNS context request denied because Queuing timer expired.
Relocation Triggered	Total number of SRNS context request denied because another relocation procedure triggered.
Unable Establish During Reloc	Total number of SRNS context request denied because RAB failed to establish during relocation as it cannot be supported in the target RNC.
Unknown Target Rnc	Total number of SRNS context request denied because the target RNC is not known to the CN.
Relocation Cancelled	Total number of SRNS context request denied because relocation procedure was cancelled by the UTRAN or the UE.
Successful Relocation	Total number of SRNS context request denied because relocation was completed successfully.
Req Cipher Algo Not Supported	Total number of SRNS context request denied because the UTRAN or the UE is unable to support the requested ciphering and/or integrity protection algorithms.

Field	Description
Conflict Cipher Info	Total number of SRNS context request denied because there was conflict in ciphering information.
Failure In The Radio I/F Proc	Total number of SRNS context request denied because radio interface procedure has failed.
Rel Due To Utran Reason	Total number of SRNS context request denied as RAB release is initiated due to UTRAN generated reason.
User Inactivity	Total number of SRNS context request denied due to user inactivity.
Time Critical Relocation	Total number of SRNS context request denied because relocation is requested for time critical reason.
Req Traffic Class Unavail	Total number of SRNS context request denied because requested traffic class was not available for subscriber or in the RAN.
Invalid Rab Parameters Val	Total number of SRNS context request denied due to invalid value in RAB parameters.
Req Max Bit Rate Unavail	Total number of SRNS context request denied because requested Maximum Bit Rate was not available for downlink or uplink in RAN.
Req Max Bit Rate DL Unavail	Total number of SRNS context request denied because requested Maximum Bit Rate was not available for downlink in RAN.
Req Max Bit Rate For UL Unavail	Total number of SRNS context request denied because requested Maximum Bit Rate was not available for uplink in RAN.
Req G-Bit Rate Unavail	Total number of SRNS context request denied because requested Guaranteed Bit Rate was not available for downlink or uplink in RAN.
Req DL G-Bit Rate Unavail	Total number of SRNS context request denied because requested Guaranteed Bit Rate was not available for downlink in RAN.
Req UL G-Bit Rate Unavail	Total number of SRNS context request denied because requested Guaranteed Bit Rate was not available for uplink in RAN.
Req Trans Delay Not Achievable	Total number of SRNS context request denied because requested transfer delay is not achievable.
Invalid Rab Param Combo	Total number of SRNS context request denied due to invalid RAB parameters combination.
ViolationFor Sdu Parameters	Total number of SRNS context request denied due to condition violation for SDU parameters.
Violation Traffic Hndl Prio	Total number of SRNS context request denied due to condition violation for traffic handling priority.
ViolationFor G-Bit Rate	Total number of SRNS context request denied due to condition violation for guaranteed bit rate.
User Plane Ver Unsupported	Total number of SRNS context request denied because requested user plane versions were not supported.
Iu Up Failure	Total number of SRNS context request denied due to failure in Iu user plane.
Trelocalloc Expiry	Total number of SRNS context request denied because Relocation Resource Allocation procedure failed due to expiry of the timer TRELOCalloc.
Relocation Failure In T-System	Total number of SRNS context request denied because relocation failed due to a failure in target CN/RNC or target system.
Invalid Rab Id	Total number of SRNS context request denied because the RAB ID is unknown in the RNC.

Field	Description
No Remaining Rab	Total number of SRNS context request denied because no RAB is available.
Interaction With Other Proc	Total number of SRNS context request denied because relocation was cancelled due to interaction with other procedure.
Repeated Integrity Check Fail	Total number of SRNS context request denied due to repeated failure in integrity checking.
Req Type Not Supported	Total number of SRNS context request denied because the RNC is not supporting the requested locationreport type.
Req Superseded	Total number of SRNS context request denied because there was a second request on the same RAB.
Ue Gen Sig Con Rel	Total number of SRNS context request denied due to due to UE generated signalling connection release
Resource Optimisation Reloc	Total number of SRNS context request denied because relocation was requested due to resource optimisation.
Req Info Unavail	Total number of SRNS context request denied because requested information is not available.
Relocation Due to Radio Reason	Total number of SRNS context request denied because relocation was requested due to radio reason.
Reloc Unsupported In T-Rnc	Total number of SRNS context request denied due to relocation failure as relocation was not supported in target RNC or target system.
Directed Retry	Total number of SRNS context request denied because retry was directed from RNC.
Radio Con With Ue Lost	Total number of SRNS context request denied because radio connection was lost with UE.
Rnc Unable Establish All Rfcs	Total number of SRNS context request denied because RNC couldn't establish all RAB subflow combinations indicated within the RAB Parameters IE.
Deciphering Keys Unavail	Total number of SRNS context request denied because RNC is not able to provide requested deciphering keys.
Dedicated AssistData Unavail	Total number of SRNS context request denied because RNC is not able to successfully deliver the requested dedicated assistance data to the UE.
Reloc Target Not Allowed	Total number of SRNS context request denied because relocation to the indicated target cell is not allowed for the UE in question.
Location Reporting Congestion	Total number of SRNS context request denied as congestion status reported location report.
Reduce Load In Serving Cell	Total number of SRNS context request denied because system was reducing load in service cell.
No Radio Resources In T-Cell	Total number of SRNS context request denied because radio resource was not available in target cell.
Geran Iu Mode Failure	Total number of SRNS context request denied because the GERAN cannot provide an appropriate RAB due to limited capabilities within GERAN.
Acc Rstrd Due To Shared N/w	Total number of SRNS context request denied because access to target system restricted due to shared networks.
Reloc Unsupported Due Puesbin	Total number of SRNS context request denied as the incoming relocation cannot be accepted by the target RNC because of the Provision of UE Specific Behavior Information to Network Entities (PUESBINE) feature.

Field	Description
Traffic T-Cell > S-Cell	Total number of SRNS context request denied because the target cell's traffic load is higher than that in the source cell.
Mbms No Multicast Svc For Ue	Total number of SRNS context request denied because the UE does not have any active multicast service.
Mbms Unknown Ue Id	Total number of SRNS context request denied because the CN does not know the UE or unknown UE identifier.
Mbms Sess Start No Data	Total number of SRNS context request denied because the MBMS Session Start procedure was successfully performed, but the RNC does not have any interested UE.
Mbms Superseded Due To Nnsf	Total number of SRNS context request denied as the MBMS Session Start procedure was rejected because NAS Node Selection Function (NNSF) towards another CN node.
Mbms Ue Linking Already Done	Total number of SRNS context request denied because the UE has already been linked to the given Multicast service.
Mbms Ue De Linking Failure	Total number of SRNS context request denied because the UE had not been linked to the given Multicast service.
Tmgi Unknown	Total number of SRNS context request denied due to requested MBMS action failure because of the indicated Temporary Mobile Group Identity (TMGI) is unknown.
MS Unspecified Failure	Total number of SRNS context request denied due to unspecified failures from UE side.
No Response From RNC	Total number of SRNS context request denied due no response from RNC.
Miscellaneous Statistics	This group displays the miscellaneous statistics.
Rnc Overload Statistics	This subgroup displays the RNC overload statistics.
Activate Request Rejected	Indicates the total number of PDP context activation requests rejected due to RNC overload.
Activation dropped during hand-off	Indicates the total number of PDP context activation dropped during handoff due to RNC overload.
Ms-Modify-Request Rejected	Indicates the total number of PDP context modify requests from MS rejected due to RNC overload.
N/W-Modify-Request Dropped	Indicates the total number of PDP context modify requests from network side dropped due to RNC overload.
Paging Req (Data) Dropped	Indicates the total number of paging requests from network side dropped due to RNC overload.
2G APN Selection Failure Statistics	
SDL-1	
All Packet Services Barred	Description: Total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - "All Packet Switched Services Barred" setting is present in the Subscription information for the subscriber. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
PDP Type not Present, PDP Address Present	Description: Total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - Activate PDP Context Request has PDP Address without PDP Type. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis

Field	Description
PDP Type not Present, APN Present	Description: Total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - Activate PDP Context Request has APN without PDP Type. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
PDP Type, Address and APN not Present, No Single SubRec	Description: Total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - PDP Type, PDP Address, APN are not present in Activate PDP Context Request and multiple PDP Subscription Records are present for the subscriber. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
SDL-2	
No SubRec matching PDP Type	Description: Total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - No PDP Subscription Records matching PDP Type from Activate PDP Context Request. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
No SubRec matching PDP Type and APN, No Wildcard APN	Description: Total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - No PDP Subscription Record matching PDP Type and APN from Activate PDP Context Request. Also, the subscriber does not have any PDP Subscription record with wildcard APN. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
Multiple SubRecs matching PDP Type and APN, No Dynamic Address	Description: Total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - Multiple PDP Subscription Records exist matching the PDP Type and APN from Activate PDP Context Request, but without dynamic PDP address. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
Multiple SubRecs matching PDP Type and APN, with Dynamic Address	Description: Total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - Multiple PDP Subscription Records exist matching the PDP Type and APN from Activate PDP Context Request, but all with dynamic PDP address. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
SDL-3	
APN not Present	
No Wildcard APN, Multiple SubRecs matching PDP Type	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN not present in Activate PDP Context Request • No PDP Subscription record with wildcard APN and Multiple PDP Subscription Records exist matching the PDP Type Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis

Field	Description
Multiple SubRecs with Wildcard APN and same PDP Type	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: - APN not present in Activate PDP Context Request - Multiple PDP Subscription Records with wildcard APN exist matching the PDP Type Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
PDP Address Present	
No SubRec matching PDP Address	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: - PDP Address present in Activate PDP Context Request - No PDP Subscription record exist matching the PDP Type and PDP Address Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
Single SubRec matching PDP Address, No APN Match	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: - PDP Address present in Activate PDP Context Request - Single PDP Subscription record exist matching the PDP Type and PDP Address, but APN does not match Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
Multiple SubRecs matching PDP Address, APN not requested	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: - PDP Address present in Activate PDP Context Request - Multiple PDP Subscription record exist matching the PDP Type and PDP Address, but APN not present in Activate PDP Context Request Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
Multiple SubRecs matching PDP Address, No APN Match	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: - PDP Address present in Activate PDP Context Request - Multiple PDP Subscription record exist matching the PDP Type and PDP Address, but APN does not match Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
SDL-4	
APN sent by MS	

Field	Description
VPLMN User, APN-OI not HPLMN, not VPLMN	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN present in Activate PDP Context Request • Subscriber is in VPLMN • Requested APN-OI is neither matching HPLMN nor VPLMN Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
VPLMN User, APN-OI is VPLMN, VPLMN Addr not allowed	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN present in Activate PDP Context Request • Subscriber is in VPLMN • Requested APN-OI matches VPLMN, but VPLMN Address is not allowed Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
VPLMN User, APN-OI is VPLMN, VPLMN AP Barred	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN present in Activate PDP Context Request • Subscriber is in VPLMN • Requested APN-OI matches VPLMN, but VPLMN Access Point Access is barred Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
VPLMN User, APN-OI is HPLMN, HPLMN AP Barred	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN present in Activate PDP Context Request • Subscriber is in VPLMN • Requested APN-OI matches HPLMN, but HPLMN Access Point Access is barred Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
VPLMN User, No APN-OI, VPLMN Addr not allowed, HPLMN AP Barred	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN present in Activate PDP Context Request • Subscriber is in VPLMN • Requested APN-OI is not present • VPLMN Address is not allowed • HPLMN Access Point Access is barred Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis

Field	Description
VPLMN User, No APN-OI, VPLMN AP Barred, HPLMN AP Barred	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN present in Activate PDP Context Request • Subscriber is in VPLMN • Requested APN-OI is not present • VPLMN Access Point Access is barred • HPLMN Access Point Access is barred Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
HPLMN user, APN-OI not HPLMN	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN present in Activate PDP Context Request • Subscriber is in HPLMN • Requested APN-OI doesn't match HPLMN Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
APN from Single Context	
VPLMN Addr not allowed, HPLMN AP Barred	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN selected from Single PDP Subscription Record • VPLMN Address not allowed • HPLMN Access Point Access is barred Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
VPLMN AP Barred, HPLMN AP Barred	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • APN selected from Single PDP Subscription Record • VPLMN Access Point Access is barred • HPLMN Access Point Access is barred Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
SDL-5:	
VPLMN User, VPLMN Addr not allowed	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • Default APN chosen by SGSN • Subscriber in VPLMN and • VPLMN Address not allowed Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis

Field	Description
VPLMN User, VPLMN AP Barred	Description: Total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reasons: • Default APN chosen by SGSN • Subscriber in VPLMN • VPLMN Access Point Access is barred Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
No Default APN for PDP Type	Description: Total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - No Default APN configured for the PDP Type. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
Internal APN Selection Failures:	
Wildcard APN with Static Address	Description: This proprietary counter indicates the total number of 2G Activate Reject(s) sent to MS for the following APN Selection Failure reason - Subscription PDP Record with wildcard APN has static PDP address. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
Unknown PDP Type in Subscribed Record	Description: This proprietary counter indicates the total number of 2G Activate Reject(s) sent to MS for the APN Selection Failure reason - matching Subscription PDP Record has unknown PDP Type. Triggers: Increments when Activate PDP Reject is sent due to this reason. Availability: per Chassis
GPRS SM Dropped Statistics	This group displays the statistics related to GPRS session manager packets dropped.
2G-Deactiv-Accept	Total number of Deactivate Accept messages received by GPRS session manager on SGSN for 2G service.
2G-Other-SM-Msg	Total number of messages received by GPRS session manager on SGSN for 2G services from other session manager.
GPRS PDP FSM Statistics	This group displays the statistics related to GPRS finite state machine states for Primary PDP Context procedures.
Pri Activ Req Rcvd	Total number of Primary PDP Context Activate Request messages received by GPRS session manager on SGSN for GPRS service.
Pri Activ Acc Sent	Total number of Primary PDP Context Activate Request Accept messages sent by GPRS session manager on SGSN for GPRS service.
Pri Activ Rej Sent	Total number of Primary PDP Context Activate Request Reject messages sent by GPRS session manager on SGSN for GPRS service.
Sec Activ Req Rcvd	Total number of Secondary PDP Context Activate Request messages received by GPRS session manager on SGSN for GPRS service.
Sec Activ Acc Sent	Total number of Secondary PDP Context Activate Request Accept messages sent by GPRS session manager on SGSN for GPRS service.
Sec Activ Rej Sent	Total number of Secondary PDP Context Activate Request Reject messages sent by GPRS session manager on SGSN for GPRS service.

Field	Description
Modify Req Rcvd	Total number of PDP Context Modify Request messages received by GPRS session manager on SGSN for GPRS service.
Modify Acc Sent	Total number of PDP Context Modify Request Accept messages sent by GPRS session manager on SGSN for GPRS service.
Modify Rej Sent	Total number of PDP Context Modify Request Reject messages sent by GPRS session manager on SGSN for GPRS service.
Modify Req Sent	Total number of PDP Context Modify Request messages sent by GPRS session manager on SGSN for GPRS service.
Modify Acc Rcvd	Total number of PDP Context Modify Request Accept messages received by GPRS session manager on SGSN for GPRS service.
Deactiv Req Rcvd	Total number of PDP Context Deactivate Request messages received by GPRS session manager on SGSN for GPRS service.
Deactiv Acc Sent	Total number of PDP Context Deactivate Request Accept messages sent by GPRS session manager on SGSN for GPRS service.
Deactiv Req Sent	Total number of PDP Context Deactivate Request messages sent by GPRS session manager on SGSN for GPRS service.
Deactiv Acc Rcvd	Total number of PDP Context Deactivate Request messages received by GPRS session manager on SGSN for GPRS service.
SM Status Sent	Total number of messages with GPRS session manager status on SGSN for GPRS service sent by SGSN.
SM Status Rcvd	Total number of messages with GPRS session manager status on SGSN for GPRS service received by SGSN.

Chapter 100

show gprs-service

This chapter includes the **show gprs-service** command output tables.

show gprs-service all

Table 242. show gprs-service all Command Output Descriptions

Field	Description
Service name	The GPRS service name that is running in this session.
Context	Name of the VPN context in which specified GPRS service is running.
Status	Status of the GPRS service for which statistics are displayed.
Accounting Context Name	Name of the accounting context for this GPRS service to enable accounting parameters.
SelfPLMN	Name of the PLMN of this GPRS service.
MAP Service	Name of the mobile application part (MAP) service configured in this GPRS service.
SGTP Service	Name of the SGSN GTTP (SGTP) service configured in this GPRS service.
GS Serviceq	Name of the Gs service configured in this GPRS service to provide Gs interface support between an SGSN and an MSC/VLR.
SM-T3385 Timeout	The time-out duration in seconds for GPRS session management timer - T3385 on network side for PDP context activation.
SM-T3386 Timeout	The time-out duration in seconds for GPRS session management timer - T3386 on network side for PDP context modification.
SM-T3395 Timeout	The time-out duration in seconds for GPRS session management timer - T3395 on network side for PDP context deactivation.
SM-Max Activate Retries	Total number of retries for PDP context activation from GPRS session manager.
SM-Max Modify Retries	Total number of retries for PDP context modification from GPRS session manager.
SM-Max Deactivate Retries	Total number of retries for PDP context deactivation from GPRS session manager.
SM-Ignore PCO IE Decode Error	Indicates whether the decoding error ignored due to incorrect PCO IE length in SM messages is enabled/disabled.
SM-Trim Trailing Spaces in APN	Indicates whether the removal of any trailing space(s) in requested APN by SGSN is enabled/disabled.
SM-APN Partial match	Indicates whether the partial matching of requested APN during APN selection is enabled/disabled.
SM-APN(R) from First Sub Record	Indicates (enabled) that the selection of the APN from the first subscription record is to be used as the requested APN.
GMM-Mnr Timeout	The time-out duration in seconds for GPRS mobility management timer - Mobile Reachable on network side.
GMM-Purge Timeout	The time-out duration in seconds for GPRS mobility management timer - Purge to hold the detach of MM context on network side.
GMM-T3313 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3313 on network side for paging procedure initiation.

Field	Description
GMM-T3312 Timeout	The periodic routing area update timer delivered by the SGSN to the UE in the Attach Accept and the Routing Area Update Accept messages.
GMM-T3370 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3370 on network side for identity request procedure.
GMM-Max Identity Retries	Maximum number of retries for identity request procedure from GPRS mobility manager.
GMM-T3360 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3360 on network side for Authentication and Cipher request procedure.
GMM-Max Auth Retries	Maximum number of retries for authentication request procedure from GPRS mobility manager.
GMM LLC Timeout	Configured timeout duration in seconds at the logical link control protocol message procedure from GPRS mobility manager.
GMM LLC PDU Life Time	Configured life time in seconds at the logical link control protocol message procedure from GPRS mobility manager.
GMM-Perform-Identity-After-Auth	Specifies whether “perform identity after authentication” procedure is enabled or not.
Ciphering Algorithm	This group provides the ciphering algorithm configuration in this GPRS service.
Priority 1..3	Specifies the priority for GPRS Encryption Algorithm (GEA) configured for ciphering in this GPRS service. Possible GPRS encryption algorithms are: gea0: GPRS Encryption Algorithm 0 (GEA0)gea1: GPRS Encryption Algorithm 1 (GEA1)gea2: GPRS Encryption Algorithm 2 (GEA2)gea3: GPRS Encryption Algorithm 3 (GEA3)
Accounting cdr-types	mcd: Mobility CDR (M-CDR)scdr: SGSN CDR (S-CDR)sms mo-cdr: SMS Mobile Originated CDR (S-MO-CDR)sms mt-cdr: SMS Mobile Terminated CDR (S-MT-CDR)
Charging Characteristics(CC) Profiles	This group provides the charging characteristics (CC) profiles configured in this GPRS service
Profile <i>nn</i>	Specifies the charging characteristic (CC) profile configured in this SGSN service. <i>nn</i> is the number of CC profiles configured in this GPRS service and possible values are 1 through 15.
Buckets	Specifies the charging bucket configured for charging characteristic in this GPRS service
paging-scheme	Specifies the paging scheme configuration information in this GPRS service
max-page-retransmission	Specifies the maximum number of retries configured for paging in this GPRS service
paging-area	Specifies the paging area information in this GPRS service.
last-known-cell	Indicate the last known cell of the subscriber.
last-known-ra	Indicate the last known routing area of the subscriber.
last-known-la	Indicate the last known location area of the subscriber.
last-known-bsc	Indicate the last known base station controller (BSC) of the subscriber.

Chapter 101

show gs-service

This chapter includes the **show gs-service** command output tables.

show gs-service all

Table 243. show gs-service all Command Output Descriptions

Field	Description
Service name	The Gs service that is running in this session.
State	Status of the Gs service.
Context	The name of the context in which Gs service is running.
SGSN Number	The E.164 number for the SGSN to associate with the Gs service.
SSN	Indicates the subsystem number configured or not. If configured it indicates SSN.
SelfSCCPNetwork Id	Indicates the SCCP network identifier configured or not. If configured it indicates SCCP network identifier.
T6-1 Timeout	Indicates the retransmission timer (T6-1) value to guard the location update. Default: 10 seconds Range: 10 to 90 seconds
T8 Timeout	Indicates the retransmission timer (T8) value to guard the explicit IMSI detach from the GPRS service procedure. Default: 4 seconds Range: 1 to 30 seconds
T9 Timeout	Indicates the retransmission timer (T9) value to guard the explicit IMSI detach from the non-GPRS service procedure. Default: 4 seconds Range: 1 to 30 seconds
T10 Timeout	Indicates the retransmission timer (T10) value to guard the implicit IMSI detach from the non-GPRS service procedure. Default: 4 seconds Range: 1 to 30 seconds
T12-1 Timeout	Indicates the retransmission timer value (T12-1) in minutes to control the resetting of SGSN-Reset variable procedure. Default: 54 minutes (plus 8 seconds for transmission delay) Range: 0 to 380 minutes
T12-2 Timeout	Indicates the retransmission timer (T10) value to guard the SGSN reset procedure. Default: 4 seconds Range: 1 to 30 seconds
Max N8 Retries	Indicates the maximum retransmission allowed for procedure for explicit IMSI detach message from GPRS service (N8). Default: 2 retries Range: 0 to 10 retries
Max N9 Retries	Indicates the maximum retransmission allowed for procedure for explicit IMSI detach message from non-GPRS service (N9). Default: 2 retries Range: 0 to 10 retries

Field	Description
Max N10 Retries	Indicates the maximum retransmission allowed for procedure for implicit IMSI detach message from non-GPRS service (N10). Default: 2 retries Range: 0 to 10 retries
Max N12 Retries	Indicates the maximum retransmission allowed for N12 procedure for sending BSSAP+ Reset Indication message (N12). Default: 2 retries Range: 0 to 10 retries
GS Service Configurations	
LAC Id	Indicates the subscriber location area code identifier configured in Gs service. Range: 1 through 65535
Pool Type	Type of pool area (non-pool area or pool area) configured in Gs service. Possible values are: - Non Pool Area - Pool Area
Pool Area/ Non Pool Area name	Name of the configured Non-pool area or pool area in Gs service.
Pool Area Configurations	
Pool Area Name	Name of the configured pool area in Gs service.
Default Vlr	Name of the default VLR attached to this pool area.
LAC in Pool Area	Indicates the subscriber location area code identifier configured in this pool area. Range: 1 through 65535
VLR Hash Type	Indicates the type of hash configured for this pool area. Possible values are: - Value - Range
Value / Range	Indicates the value of hash or range of hash.
Vlr Name	Name of the VLR attached to this pool area.
Non-Pool Area Configurations	
Non-Pool Area Name	Name of the configured non-pool area in Gs service.
Vlr Name	Name of the VLR attached to this non-pool area.
LAC in Pool Area	Indicates the subscriber location area code identifier configured in this non-pool area. Range: 1 through 65535
VLR Configurations	
VLR Name	Name of the VLR attached to this Gs service.
ISDN Numbe	Indicates the E.164 ISDN number of configured VLR.
SSN	Indicates the subsystem number configured or not. If configured it indicates SSN.
Point Code	Indicates the configured point code address for VLR in SS7 address format.

Field	Description
SGSN Reset	Indicates whether SGSN reset function is allowed or not. Possible values are: • TRUE • FALSE

Chapter 102

show gtpc

This chapter includes the **show gtpc** command output tables.

show gtpc counters ggsn-service

Table 244. show gtpc counters ggsn-service Command Output Descriptions

Field	Description
APN Name	The name of the APN that the subscriber is currently accessing.
Callid	The call identification number that uniquely identifies the subscriber.
IMSI	The subscriber's International Mobile Subscriber Identity.
NSAPI	The subscriber's Network Service Access Point Identifier.
Updates PDP Context	
Update PDP Context RX	The total number of Update PDP Context Request messages received from the SGSN(s).
Accepted	The total number of Update PDP Context Response messages transmitted to the SGSN(s) containing a cause value of 128 (80H, Request accepted).
Denied	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s).
Update PDP Context Denied	
System Failure	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 204 (CCH, System failure).
Invalid Message Format	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format).
Semantic Error in TFT	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation).
Syntactic Error in TFT	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation).
Semantic Error in Packet Filter	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)).
Mandatory IE Incorrect:	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing).
Syntactic Error in Packet Filter	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)).
Optional IE Incorrect	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect).
Updates PDP Context Sent	
Update PDP Context RX	The total number of Update PDP Context Request messages transmitted to the SGSN(s).

Field	Description
Accepted	The total number of Update PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted).
Denied	The total number of “reject” Update PDP Context Response messages received from the SGSN(s).
Update Sent Reasons	
IP Address Updated	The total number of Update PDP Context Request messages transmitted to the SGSN(s) because of a change in the IP address of the PDP context.
QoS Updated	The total number of Update PDP Context Request messages transmitted to the SGSN(s) because of a change in the quality of service (QoS) level for the PDP context.
Misc. Reasons	The total number of Update PDP Context Request messages transmitted to the SGSN(s) for other reasons.
Update PDP Context Deny Received	
System Failure	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 204 (CCH, System failure).
Non-existent	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format).
Unsupported Service	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation).
Invalid Message Format	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation).
Semantic Error in TFT	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)).
Syntactic Error in TFT	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect).
Semantic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing).
Mandatory IE Incorrect	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)).
Mandatory IE Missing	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect).
Syntactic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 204 (CCH, System failure).
Optional IE Incorrect	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format).
GTPU Receive	
Total Packets	The total number of GTPU packets received.
Total Bytes	The total number of GTPU bytes received.
GTPU Send	
Total Packets	The total number of GTPU packets transmitted.

Field	Description
Total Bytes	The total number of GTPU bytes transmitted.

show gtpc full

Table 245. show gtpc full Command Output Descriptions

Field	Description
APN Name	The name of the APN that the subscriber is currently accessing.
Callid	The call identification number that uniquely identifies the subscriber.
User Name	The user name associated with this session.
User Address	Is the address of the user's PDP context in dotted decimal notation.
Session Type	Specifies the type of session for MBMS service. Possible values are: • MBMS UE • MBMS Multicast Bearer
Mcast Address	Displays the IP address of Broadcast Multicast service center.
Update MBMS Context RX	Total number of update messages received for MBMS context.
Accepted	Total number of update messages received and accepted for MBMS context
Denied	Total number of update messages received and denied for MBMS context
Discarded	Total number of update messages discarded for MBMS context
IMEI(SV)	Indicates the International Mobile Equipment Identity (and Software Version) (IMEI(SV)) of subscriber's mobile equipment.
IMSI	The subscriber's International Mobile Subscriber Identity.
NSAPI	The subscriber's Network Service Access Point Identifier.
GGSN Service	Specifies the name of a configured GGSN service that can be from 1 to 63 alpha and/or numeric characters and is case sensitive.
SGSN Address	Specifies the IP address for the SGSN.
MBMS Session Start	This group specifies the statistics of messages for MBMS session start.
MBMS Session Start TX	Total number of messages sent for MBMS session start.
Accepted	Total number of messages accepted for MBMS session start.
Denied	Total number of messages denied for MBMS session start.
MBMS Session Start Denied	This group specifies the statistics of reasons for denial of MBMS session.
No Resources	Total number of MBMS session start messages denied due to non-availability of resources.
No Memory	Total number of MBMS session start messages denied due to non-availability of memory.

Field	Description
System Failure	Total number of MBMS session start messages denied due to system failure.
Non-existent	Total number of MBMS session start messages denied due to non-existence of MBMS context.
Invalid Message Format	Total number of MBMS session start messages denied due to invalid message format.
Mandatory IE Incorrect	Total number of MBMS session start messages denied as mandatory information element was incorrect.
Mandatory IE Missing	Total number of MBMS session start messages denied as mandatory information element was missing.
Bearer Ctxt Superseded	Total number of MBMS session start messages denied as bearer context get superseded by information in message.
MBMS Session Stop	This group specifies the statistics of messages for MBMS session stop.
MBMS Session Stop TX	Total number of messages sent for MBMS session stop.
Accepted	Total number of messages accepted for MBMS session stop.
Denied	Total number of messages denied for MBMS session stop.
Charging ID	Contains an identifier used for correlating charging records and events.
Charging Characteristics Statistics	Hot - The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "1", representing "hot" billing. Normal - The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "8", representing "normal" billing. Prepaid - The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "4", representing "prepaid billing." Flat - The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "2", representing "flat-rate" billing.
User Location Info Type	Indicates the type of User Location Information, Cell Global Identification (CGI) or Service Area Identity (SAI) of where the user currently is registered or available.
User Location Info	Indicates the information of User location, CGI or SAI.
MS TimeZone	The Time Zone MS is sending in the CPC/UPC message.
Daylight Saving Time	The number of hours the MS TimeZone is adjusted for Daylight Savings Time
CAMEL Charging Info	Indicates whether or not CAMEL charging information was received.
Length	The length of the CAMEL Information PDP IE
Payload Compression	Indicates whether payload compression is allowed or prohibited.
Transitions to Presv. Mode	Indicates total number sessions in transitions state for preservation mode. Note: This is a customer specific counter and dependent of customer specific license only.
Transitions to LORC state	Indicates total number sessions in transitions state for overcharging protection support mode. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QoS change with GTP-C extension for LORC.

Field	Description
GTP-U Tunnel Establishment	Indicates if the particular session is using direct tunnel or not. Possible values are: • Normal • Pending • Direct-Tunnel Status “Pending” means that GGSN is switching from direct-tunnel to two tunnels for the particular session. “Normal” status indicates that particular context is not using Direct Tunnel.
Updates PDP Context	
Update PDP Context RX	The total number of Update PDP Context Request messages received from the SGSN(s).
Accepted	The total number of Update PDP Context Response messages transmitted to the SGSN(s) containing a cause value of 128 (80H, Request accepted).
Denied	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s).
Update PDP Context Denied	
System Failure	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 204 (CCH, System failure).
Invalid Message Format	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format).
Semantic Error in TFT	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation).
Syntactic Error in TFT	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation).
Semantic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)).
Mandatory IE Incorrect:	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing).
Syntactic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)).
Optional IE Incorrect	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect).
Updates PDP Context Sent	
Update PDP Context TX	The total number of Update PDP Context Request messages transmitted to the SGSN(s).
Accepted	The total number of Update PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted).
Denied	The total number of “reject” Update PDP Context Response messages received from the SGSN(s).
Update PDP Context Deny Received	

Field	Description
System Failure	The total number of “reject” Update PDP Context Response messages received with a cause code of 204 (CCH, System failure).
Non-existent	The total number of “reject” Update PDP Context Response messages received with a cause code of 192 (C0H, Non-existent).
Invalid Message Format	The total number of “reject” Update PDP Context Response messages received with a cause code of 193 (C1H, Invalid message format).
Semantic Error in TFT	The total number of “reject” Update PDP Context Response messages received with a cause code of 215 (D7H, Semantic error in the TFT operation).
Syntactic Error in TFT	The total number of “reject” Update PDP Context Response messages received with a cause code of 216 (D8H, Syntactic error in the TFT operation).
Semantic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages received with a cause code of 217 (D9H, Semantic error in packet filter(s)).
Mandatory IE Incorrect:	The total number of “reject” Update PDP Context Response messages received with a cause code of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of “reject” Update PDP Context Response messages received with a cause code of 202 (CAH, Mandatory IE missing).
Syntactic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages received with a cause code of 218 (DAH, Syntactic error in packet filter(s)).
Optional IE Incorrect	The total number of “reject” Update PDP Context Response messages received with a cause code of 203 (CBH, Optional IE incorrect).
GTPU Receive	
Total Packets	The total number of GTP User (GTPU) packets received.
Traffic Class	
Conversational	The number of GTPU packets received tagged with a traffic class of Conversational.
Streaming	The number of GTPU packets received tagged with a traffic class of Streaming.
Interactive 1	The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 1.
Interactive 2	The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 2.
Interactive 3	The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 3.
Background	The number of GTPU packets received tagged with a traffic class of Background.
GTPU Send	
Total Packets	The total number of GTP User (GTPU) packets transmitted.
Traffic Class	
Conversational	The number of GTPU packets transmitted tagged with a traffic class of Conversational.
Streaming	The number of GTPU packets transmitted tagged with a traffic class of Streaming.
Interactive 1	The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 1.
Interactive 2	The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 2.

Field	Description
Interactive 3	The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 3,
Background	The number of GTPU packets transmitted tagged with a traffic class of Background.

show gtpc summary callid

Table 246. show gtpc summary callid Command Output Descriptions

Field	Description
GTP Summary	Displays a brief status for GTP.
Update PDP Context RX	Displays the total number of Update PDP Context Request messages received.
Accepted	Displays the number of Update PDP Context Request messages received that were accepted.
Denied	Displays the number of Update PDP Context Request messages received that were denied.
Update PDP Context TX	Displays the total number of Update PDP Context Request messages transmitted.
Accepted	Displays the number of Update PDP Context Request messages received that were transmitted.
Denied	Displays the number of Update PDP Context Request messages received that were transmitted.
IP Address Updates	Displays the number of times the IP address was updated.
QoS Updates	Displays the number of times the quality of service (QoS) level was changed.
Misc. Updates	Displays the number of updates experienced.
Qos negotiation	
CPC Qos Accepted	The number of times QoS parameters received in Create PDP Context (CPC) Request messages were accepted.
CPC Qos Downgrade	The number of times QoS parameters received in Create PDP Context (CPC) Request messages were downgraded.
UPC Qos Accepted	The number of times QoS parameters received in Update PDP Context (UPC) Request messages were accepted.
UPC Qos Downgraded	The number of times QoS parameters received in Update PDP Context (UPC) Request messages were downgraded.
GTPU Receive	
Total Packets	The total number of GTP User (GTPU) packets received.
Traffic Class	
Conversational	The number of GTPU packets received tagged with a traffic class of Conversational.
Streaming	The number of GTPU packets received tagged with a traffic class of Streaming.
Interactive 1	The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 1.
Interactive 2	The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 2.
Interactive 3	The number of GTPU packets received tagged with a traffic class of Interactive and a priority of 3.

Field	Description
Background	The number of GTPU packets received tagged with a traffic class of Background.
GTPU Send	
Total Packets	The total number of GTP User (GTPU) packets transmitted.
Traffic Class	
Conversational	The number of GTPU packets transmitted tagged with a traffic class of Conversational.
Streaming	The number of GTPU packets transmitted tagged with a traffic class of Streaming.
Interactive 1	The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 1.
Interactive 2	The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 2.
Interactive 3	The number of GTPU packets transmitted tagged with a traffic class of Interactive and a priority of 3.
Background	The number of GTPU packets transmitted tagged with a traffic class of Background.

show gtpc statistics custom1



Important: These statistics are specific to Free-of-Charge service (FoCS) and Operator Determined Barring (ODB) support using private GTP-C extensions and enabled under customer-specific license. For more information on this support, contact your local representative.

Table 247. show gtpc statistics custom1 Command Output Descriptions

Field	Description
Preservation Mode stats	Displays the statistics of GTP-C messages in preservation mode.
Sessions in preservation mode	Indicates total number sessions in preservation mode.
Transitions to preservation mode	Indicates total number sessions in transitions state from non-preservation mode to preservation mode.
Transitions to non-preservation mode	Indicates total number sessions in transitions state from preservation mode to non-preservation mode.
Free Of Charge Service stats	Displays the statistics of GTP-C messages for Free-of-Charge services.
Session stats	Indicates sessions statistics for FOCS and/or ODB enabled sessions.
FOCS	Indicates the total number of sessions Free-of-Charge services (FOCS) enabled status.
ODB	Indicates the total number of sessions with Operator Determined Barring enabled status.
Sessions release stats	Indicates the statistics for sessions, in preservation mode of using FOCS and/or ODB, released due to any reason
Other-reasons	Indicates the total number of sessions, in preservation mode of using FOCS and/or ODB, released due to reasons not specified in this table.
in-acl-disconnect-on-violation	Indicates the total number of sessions, in preservation mode of using FOCS and/or ODB, released due to ACL rule violation.

show gtpc statistics custom2



Important: These statistics are specific to private GTP-C extensions for overcharging protection on loss of radio coverage for a subscriber. For more information on this support, contact your local representative.

Table 248. show gtpc statistics custom2 Command Output Descriptions

Field	Description
LORC Stats	This group indicates the status of loss of radio coverage extensions in GTP-C messages configured for overcharging protection.
Sessions in lorc state	Indicates the number of GGSN session are in LORC state and subscriber is in out of radio coverage area. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC.
Transitions to lorc state	Indicates total number sessions in transitions state for overcharging protection support mode. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC.

show gtpc statistics verbose

Table 249. show gtpc statistics verbose Command Output Descriptions

Field	Description
Session Stats	
Total Current	The total number of PDP contexts currently being facilitated by the system.
IPv4	The number of IPv4 PDP contexts currently being facilitated by the system.
PPP	The number of PPP PDP contexts currently being facilitated by the system.
IPv6	The number of IPv6 PDP contexts currently being facilitated by the system.
Network Initiated	The number of PDP contexts currently being facilitated by the system that were activated using the NRPA procedure.
IPv4v6	The number of IPv4v6 PDP contexts currently being facilitated by the system.
MBMS UE	Total number of MBMS UE context connected.
MBMS Mcast Bearer	Total number of MBMS multicast bearer context connected.
MBMS Bcast Bearer	Total number of MBMS broadcast bearer context connected.
Total Setup	The total number of PDP contexts that have been facilitated by the system since it was either powered up or since the statistics were last cleared -whichever is latest.
IPv4	The total number of IPv4 PDP contexts that have been facilitated by the system.
PPP	The total number of PPP PDP contexts that have been facilitated by the system.
IPv6	The total number of IPv6 PDP contexts that have been facilitated by the system.
SGSN Initiated	The total number of SGSN-initiated PDP contexts that have been facilitated by the system
IPv4v6	The number of IPv4v6 PDP contexts currently being facilitated by the system.
Network Initiated	The number of IPv4v6 PDP contexts currently being facilitated by the system that were activated using the NRPA procedure.
MBMS UE	Total number of MBMS UE context connected.
MBMS Mcast Bearer	Total number of MBMS multicast bearer context connected.
MBMS Bcast Bearer	Total number of MBMS broadcast bearer context connected.
Total Released	The total number of PDP contexts that have been released by the system.
Dynamic Address Allocation	
IPv4 Attempt	The total number of IPv4 sessions attempted with dynamic PDP address allocation.
Successful	The total number of IPv4 sessions successfully established with dynamic PDP address allocation.
IPv6 Attempt	The total number of IPv6 sessions attempted with dynamic PDP address allocation.

Field	Description
Successful	The total number of IPv6 sessions successfully established with dynamic PDP address allocation.
IP Authentication	
CHAP Auth Attempt	The total number PDP contexts that attempted CHAP authentication.
Successful	The total number PDP contexts that were successfully authenticated using CHAP.
Failure	The total number PDP contexts that failed authentication attempting to use CHAP.
PAP Auth Attempt	The total number PDP contexts that attempted PAP authentication.
Successful	The total number PDP contexts that were successfully authenticated using PAP.
Failure	The total number PDP contexts that failed authentication attempting to use PAP.
No Auth Requests	The total number PDP contexts that did not have authentication enabled.
Session Release Reasons	
SGSN Initiated	The total number of PDP contexts that have been released due to the receipt of a Delete PDP Context message from the SGSN(s).
Secondary Teardown	The total number of PDP contexts that have been released due to the termination of a secondary context (for example, a teardown flag was set in Delete PDP Context message received or a teardown happened due to the context replacement case).
Session Mgr. Died	The total number of PDP contexts that have been released due to the termination of the Session Manager task that was facilitating the contexts.
Admin Releases	The total number of PDP contexts that have been released due by the system administrator (for example, issuing the clear subscriber command, or stopping the GGSN service).
APN Removed	The total number of PDP contexts that have been released due to the removal of the APN configuration from the system.
Call Aborted	The total number of PDP contexts that have been released due to miscellaneous reasons such as the removal of a source or destination context on the system, etc.
Idle Timeout	The total number of PDP contexts that have been released due to the expiration of the idle timeout period as configured in the APN configuration mode.
Absolute Timeout	The total number of PDP contexts that have been released due to the expiration of the absolute timeout period as configured in the APN configuration mode.
Source Addr Violation	The total number of PDP contexts that have been released due to the detection of a source violation.
Flow Addition Failure	The total number of PDP contexts that have been released due to the system's failure to add a flow.
DHCP Renewal Failure	The total number of PDP contexts that have been released due to a DHCP lease renewal failure.
Long Duration Timeout	The total number of PDP contexts that have been released due to the expiration of the long duration timeout period.
Error Indication	The total number of PDP contexts that have been released due to an error indication.
Context replacement	The total number of PDP contexts that have been released due to a context replacement.

Field	Description
Other Reasons	The total number of PDP contexts that have been released due to other reasons.
Purged via Audit	The total number requests that were purged during Session Manager recovery. If the GTPCMgr did not get an audit request for a particular session, then it is released by GTPCMgr.
Update Handoff Reject	The total number of PDP contexts that have been released due to the receipt of a reject message during an update handoff.
Total Path Failures	The total number of PDP contexts that have been released due to SGSN path failures detected by the system.
Create PDP Req	The total number of PDP contexts that have been released due to path failures detected after sending a Create PDP Context Request message.
Update PDP Req	The total number of PDP contexts that have been released due to path failures detected after sending a Update PDP Context Request message.
Echo Response	The total number of PDP contexts that have been released due to path failures detected after sending an Echo Response message.
Echo Timeout	The total number of PDP contexts that have been released due to path failures detected after sending an Echo Timeout message.
Path Management Messages	
Echo Request RX	The total number of Echo Requests received from SGSN(s).
Echo Response TX	The total number of Echo Responses sent to SGSN(s) in response to Echo Requests.
Echo Request TX	The total number of Echo Requests sent to the SGSN(s).
Echo Response RX	The total number of Echo Responses received from SGSN(s) in response to Echo Requests.
GTP-U Echo Request RX	The total number of GTPU Echo Requests received from SGSN(s).
GTP-U Echo Response TX	The total number of GTPU Echo Responses sent to SGSN(s) in response to GTPU Echo Requests.
GTP-U Echo Request TX	The total number of GTPU Echo Requests sent to the SGSN(s).
GTP-U Echo Response RX	The total number of GTPU Echo Responses received from SGSN(s) in response to GTPU Echo Requests.
Version Not Supported	
RX	The total number of Version Not Supported messages received.
TX	The total number of Version Not Supported messages transmitted.
Supported Ext. Headers Notif	
RX	The total number of supported extension headers notifications received.
TX	The total number of supported extension headers notifications transmitted.
Tunnel Management Messages	
Total CPC Req	The total number of Create PDP Context Request messages received. This is the sum of GTPC v0 and GTP v1 messages.

Field	Description
CPC Req(V1)	The total number of Create PDP Context Request messages received that used GTPC version 1.
CPC Req(V0)	The total number of Create PDP Context Request messages received that used GTPC version 0.
Primary CPC Req	The total number of Activate Primary PDP Context Request received.
Secondary CPC Req	The total number of Activate Secondary PDP Context Request received
Initial CPC Req	The total number of non-retransmitted Create PDP Context Requests for the primary PDP context.
Retransmitted	The total number of re-transmitted Create PDP Context Request messages received for either the primary or secondary PDP contexts.
Total Accepted	The total number of Create PDP Context Response messages transmitted containing a cause value of 128 (80H, Request accepted).
Total Denied	The total number of "reject" Create PDP Context Response messages transmitted.
Total Discarded	The total number of Create PDP Context Request messages received from the SGSN(s) that were discarded.
Update PDP Context RX	The total number of Update PDP Context Request messages received from the SGSN(s).
Accepted	The total number of Update PDP Context Response messages transmitted to the SGSN(s) containing a cause value of 128 (80H, Request accepted).
Denied	The total number of "reject" Update PDP Context Response messages transmitted to the SGSN(s).
Update PDP Context TX	The total number of Update PDP Context Request messages transmitted to the SGSN(s).
Accepted	The total number of Update PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted).
Denied	The total number of "reject" Update PDP Context Response messages received from the SGSN(s).
Delete PDP Context RX	The total number of Delete PDP Context Request messages received from the SGSN(s).
Accepted	The total number of Delete PDP Context Response messages transmitted containing a cause value of 128 (80H, Request accepted).
Denied	The total number of "reject" Delete PDP Context Response messages transmitted.
Discarded	The total number of Delete PDP Context Request messages received from the SGSN(s) that were discarded
Delete PDP Context TX	The total number of Delete PDP Context Request messages transmitted to the SGSN(s).
Accepted	The total number of Delete PDP Context Response messages received from the SGSN(s) containing a cause value of 128 (80H, Request accepted).
Denied	The total number of "reject" Delete PDP Context Response messages received from the SGSN(s).
Error Indication RX	The total number of error indication messages received from the SGSN(s).
Error Indication TX	The total number of error indication messages transmitted to the SGSN(s).

Field	Description
PDU Notification	The total number of PDU notifications sent by GGSN as a part of the NRPA procedure.
Accepted	The total number of accepted PDU notifications sent by GGSN as a part of the NRPA procedure.
Denied	The total number of rejected PDU notifications sent by GGSN as a part of the NRPA procedure.
PDU Notificatn Reject	The total number of PDU Notification Rejects that were received.
Accepted	The total number of PDU Notification Rejects that were received and accepted.
Denied	The total number of PDU Notification Rejects that were received and rejected.
Discarded	The total number of PDU Notification Rejects that were received and discarded.
GTP-U Tunnel Establishment with RNC	
Direct Tunnels Established	Indicates the number of times direct tunnels established between GGSN and RNC as instructed by SGSN in Update PDP Context Request.
Direct Tunnels torn down by SGSNs	Indicates the total number of times direct tunnels between GGSN and RNC are removed as instructed by SGSN in Update PDP Context Request.
Direct Tunnels that received Error Indication	Indicates the total number of Direct Tunnels that have received GTP Error Indication from RNC. This statistic counts GTP Error Indication only once per Direct Tunnel.
Update PDP Tx Reasons	
QoS Change	The number of Update PDP Context Request messages were sent when the GGSN requested the QoS Profile information to the SGSN.
Providing PDP address	The providing PDP address that is sent to the SGSN.
Direct Tunnel Flags update	Indicates the number of Update PDP Context Requests going out of GGSN towards SGSN with direct tunnel flags IE.
Update PDP Context Rx Reasons	
SGSN Handoff	The total number SGSN handoffs that have been completed for which PDP context updated.
SGSN Group Handoff	The total number handoffs between SGSN groups that have been completed for which PDP context updated.
Create PDP Context Denied	
No Resources	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 199 (C7H, No resources available). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - No Resource Reasons of this table.
No Memory	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 212 (D4H, No memory is available). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - No Memory of this table.

Field	Description
All Dyn Addr Occupied	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 211 (D3H, All dynamic PDP addresses are occupied). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Dynamic Address Occupied of this table.
User Auth Failed	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (D1H, User authentication failed). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Auth Failure Reasons section of this table.
Unknown/Missing APN	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 219 (DBH, Missing or unknown APN).
System Failure	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 204 (CCH, System failure). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - System Failure Reasons section of this table.
Unknown PDP Addr/Type	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 220 (DCH, Unknown PDP address or PDP type). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Unknown PDP Addr or Type section of this table.
Unsupported Version	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 198 (C6H, version not supported).
Semantic Error in TFT	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation).
Syntactic Error in TFT	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation).
Semantic Error in Packet Filter	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)).
Mandatory IE Incorrect	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Mandatory IE Incorrect section of this table.
Mandatory IE Missing	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing).
Syntactic Error in Packet Filter	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)).
Optional IE Incorrect	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect). NOTE: Statistics that further detail the reasons for rejecting a Create PDP Context Request with this reason are located in the Create PDP Denied - Optional IE Incorrect section of this table.

Field	Description
Invalid Message Format	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format).
Context Not Found	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 210 (D2H, Context not found).
Service not Supported	The total number of “reject” Create PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 200 (C8H, Service not supported).
APN restriction	
No APN Subscription	Indicates that the GGSN has denied the user access to an APN because a subscription is required, but the subscriber does not have the necessary subscription.
Create PDP Denied - No Resource Reasons	
PLMN Policy Reject	The PLMN policy configured for the GGSN service processing the request is configured to reject the SGSN's requests.
New Call Policy Reject	The system is configured with a newcall policy to reject new sessions.
APN/Svc Capacity	The APN being accessed is currently facilitating the maximum number of PDP contexts specified in its configuration (refer to the max-contexts command in the APN configuration mode).
Input-Q Exceeded	The queue size between demux-mgr and session managers has been exceeded due to pending requests.
No Session Manager	No Session Manager task is available to process the request.
Session Manager Dead	The Session Manager Task assigned to the PDP context was terminated.
Secondary For PPP	A secondary request for PPP was received.
Other Reasons	Other reasons not listed here.
Session Mgr Retried	Multiple Session Manager Tasks were unable to accept the request.
Session Mgr Not Ready	The Session Manager Task assigned to the PDP context was not ready to accept the request.
Session Setup Timeout	The total number of Create PDP Context (CPC) reject due to session setup timeout
Charging Svc Auth Fail	Authorization with the charging service failed.
ICSR State Invalid	Indicates that the Create PDP request was denied because the interchassis session recovery state is invalid.
DHCP IP Address Not Present	DHCP-assigned IP addresses were not available for assignment to the PDP Context.
Radius IP Validation Failed	RADIUS IP validation failed.
Congestion Policy Applied	The system entered a state resulting in the invocation of a GGSN service “reject” congestion policy.
GTP-v0 IP address allocation/validation failed	IP address allocation or validation failed.
Mediation Delay GTP Response Accounting Start failed:	The number of call setup failures due to Accounting Start failures with delay GTP response feature enabled.
Create PDP Denied - Auth Failure Reasons	

Field	Description
Authentication Failed	The total number of requests rejected due to incorrect username/password.
AAA Auth Req Failed	The total number of requests rejected due to authentication failure requests.
APN selection-mode mismatch	The total number of requests rejected due to a conflicting configuration of the Selection Mode in the Create PDP Context request and the APN.
Non-Existent Virtual APN	The request is rejected due to an invalid APN.
Create PDP Denied - No Memory	
No More AAA Sessions	The total number of requests rejected due to the system not having AAA session handles available.
Misc. Reasons	The total number of requests rejected due to the system not being able to allocate the memory required for processing the request.
Create PDP Denied - Unknown PDP Addr or Type	
Invalid IP Address	The total number of requests rejected due to the receipt of an invalid IP address (i.e. 0.0.0.0) from the SGSN.
Conflict IP Address	The total number of requests rejected due to a conflict between the IP addresses provided by the MS and RADIUS servers.
Static Address Not Present	The total number of requests rejected due to the MS not having a static address when the system is configured with an IP address allocation method of static.
Static Address Not Allowed	The total number of requests rejected due to the system's IP address allocation method being configured for static, but the Create PDP Context Request message requests dynamic allocation.
Static IP Validation Failed	The total number of requests rejected due to the validation failure of the static IP address offered by the MS.
Local Pool Static Address Not Allowed	The total number of requests rejected due to the MS offering a static IP address that is not configured in a pool on the system.
DHCP IP Validation Failed	The total number of requests rejected due to the validation failure of the IP address allocated by DHCP.
DHCP Relay Static Address Not Allowed	The total number of requests rejected due to the IP address being present in the call but the system not being configured to accept statically assigned addresses for DHCP relay.
DHCP Client Static Address Not Allowed	The total number of requests rejected due to the IP address being present in the call but the system not being configured to accept statically assigned addresses for DHCP client.
PDP Type Mismatch or Unknown PDP Type	The total number of requests rejected due to an unknown PDP type or a PDP type that does not match with the one configured for the APN using the pdp-type command.
Create PDP Denied - Dynamic Address Occupied	
DHCP No IP Address Alloc	The total number of requests rejected due to a failure in DHCP IP address allocation.
DHCP Timer Notification	The total number of requests rejected due to an expiration of the system's DHCP timer prior to the receipt of a reply from the DHCP server resulting in a failure to allocate an IP address.
Local IP Validation Failed	The total number of requests rejected due to an IP address validation failure.

Field	Description
Local IP Pool All Address Occupied	The total number of requests that are occupied due to an IP address is occupied.
Create PDP Denied - System Failure Reasons	
Misc. Reasons	The total number of requests rejected due to miscellaneous reasons.
Create PDP Denied - Mandatory IE Incorrect	
NSAPI	The total number of requests rejected due to an invalid NSAPI.
Create PDP Denied - Optional IE Incorrect	
Private Extention	The total number of requests rejected due to incorrect optional information elements in the request such as private extensions.
Create PDP Discard Reasons	
No Session	The total number of requests discarded due to no session being found for the secondary context request.
No Memory	The total number of requests discarded due to no memory being available on the system to allocate for the request.
Malformed Message	The total number of requests discarded due to the request being poorly formed.
Invalid Ctrl TEID	The total number of requests discarded due to an invalid control TEID in the request.
Internal Bounce Error	The total number of requests discarded due to a bounce in an internal system message.
Misc. Reasons	The total number of requests discarded due to miscellaneous reasons.
Version Not Supported	The total number of requests discarded due to the request using an unsupported version.
Congestion Policy Applied	The system entered a state resulting in the invocation of a GGSN service “drop” congestion policy.
ICSR State Invalid	Indicates that the Create PDP request was denied because the interchassis session recovery state is invalid.
Update PDP Context Denied	
No Resources	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 199 (C7H, No resources available).
No Memory	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 212 (D4H, No memory is available).
System Failure	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 204 (CCH, System failure).
Non-existent	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 192 (C0H, Non-existent).
Unsupported Service	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 200 (C8H, Service not supported).
Invalid Message Format	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format).

Field	Description
Semantic Error in TFT	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation).
Syntactic Error in TFT	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation).
Semantic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)).
Mandatory IE Incorrect	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing).
Syntactic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)).
Optional IE Incorrect	The total number of “reject” Update PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect).
Update PDP Context Deny Received	
No Resources	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 199 (C7H, No resources available).
No Memory	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 212 (D4H, No memory is available).
System Failure	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 204 (CCH, System failure).
Non-existent	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 192 (C0H, Non-existent).
Unsupported Service	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 200 (C8H, Service not supported).
Invalid Message Format	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format).
Semantic Error in TFT	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 215 (D7H, Semantic error in the TFT operation).
Syntactic Error in TFT	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 216 (D8H, Syntactic error in the TFT operation).
Semantic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 217 (D9H, Semantic error in packet filter(s)).
Mandatory IE Incorrect	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing).
Syntactic Error in Packet Filter	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 218 (DAH, Syntactic error in packet filter(s)).

Field	Description
Optional IE Incorrect	The total number of “reject” Update PDP Context Response messages received from the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect).
Delete PDP Context Denied	
Mandatory IE Incorrect	The total number of “reject” Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of “reject” Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing).
Optional IE Incorrect	The total number of “reject” Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect).
Invalid Message Format	The total number of “reject” Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format).
Non-existent	The total number of “reject” Delete PDP Context Response messages transmitted to the SGSN(s) sent with a cause code of 192 (C0H, Non-existent).
Delete PDP Context Discard Reasons	
No Memory	The total number of “reject” Delete PDP Context Response messages received from the SGSN and discarded due to no memory being available to process the request.
Pacing Queue Exceeded	The total number of “reject” Delete PDP Context Response messages received from the SGSN and discarded due to there being too many requests pending in the Session Manager Task’s Pacing Queue.
Recovery Session Fail	The total number of “reject” Delete PDP Context Response messages received from the SGSN and discarded due to the recovery of a demux-manager resulting in its inability to queue the request for processing.
ICSR State Invalid	Indicates that the delete PDP request was denied because the interchassis session recovery state is invalid.
Delete PDP Context Deny Received	
Mandatory IE Incorrect	The total number of “reject” Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of “reject” Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 202 (CAH, Mandatory IE missing).
Optional IE Incorrect	The total number of “reject” Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 203 (CBH, Optional IE incorrect).
Invalid Message Format	The total number of “reject” Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 193 (C1H, Invalid message format).
Non-existent	The total number of “reject” Delete PDP Context Response messages received from the SGSN(s) sent with a cause code of 192 (C0H, Non-existent).
Location Management Messages	
Send Routing Info	The total number of Send Routing Info Request messages sent by the GGSN to the SGSN(s).
Accepted	The total number of Send Routing Info Request messages sent by the GGSN to the SGSN(s) that were accepted.

Field	Description
Denied	The total number of Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied.
Failure Report	The total number of Failure Report messages sent by the GGSN to the SGSN(s).
Accepted	The total number of Failure Report messages sent by the GGSN to the SGSN(s) that were accepted.
Denied	The total number of Failure Report messages sent by the GGSN to the SGSN(s) that were denied.
Note MS GPRS Present	The total number of Note to MS GPRS Present Request messages sent by the GGSN to the SGSN(s).
Accepted	The total number of Note to MS GPRS Present Request messages sent by the GGSN to the SGSN(s) that were accepted.
Denied	The total number of Note to MS GPRS Present Request messages sent by the GGSN to the SGSN(s) that were denied.
Discarded	The total number of Note to MS GPRS Present Request messages sent by the GGSN to the SGSN(s) that were discarded.
Send Routing Information Request Failure Causes	
No Resources Available	The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 199 (C7H, No resources available).
Service Not Supported	The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 200 (C8H, Service not supported).
System Failure	The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 204 (CCH, System failure).
Mandatory IE Incorrect	The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 202 (CAH, Mandatory IE missing).
Optional IE Incorrect	The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 203 (CBH, Optional IE incorrect).
Invalid Message Format	The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied with a cause code of 193 (C1H, Invalid message format).
No Proxy Found	The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied because no proxy MAP configuration was located for the NRPA procedure.
Proxy Not Reachable	The total number of Note to Send Routeing Info Request messages sent by the GGSN to the SGSN(s) that were denied because the configured MAP proxy is unreachable (i.e. not responding to SRI requests).
Send Routeing Information Failure MAP Causes	
Subscriber Absent	The total number of Send Routeing Info Request responses received with a failure MAP cause of subscriber absent.

Field	Description
System Failure	The total number of Send Routeing Info Request responses received with a failure MAP cause of system failure.
Data Missing	The total number of Send Routeing Info Request responses received with a failure MAP cause of data missing.
Unexpected Data	The total number of Send Routeing Info Request responses received with a failure MAP cause of unexpected data.
Unknown Subscriber	The total number of Send Routeing Info Request responses received with a failure MAP cause of unknown subscriber.
Facility Not Supported	The total number of Send Routeing Info Request responses received with a failure MAP cause of facility not supported.
Unauthorized Network	The total number of Send Routeing Info Request responses received with a failure MAP cause of unauthorized network.
PDU Notification Failure Causes	
Unsupported Service	The total number of PDU Notification responses received with a failure cause code of 200 (C8H, Service not supported).
System Failure	The total number of PDU Notification responses received with a failure cause code of 204 (CCH, System failure).
MS GPRS Detached	The total number of PDU Notification responses received with a failure cause code of 195 (C3H, MS is GPRS Detached).
GPRS Cnxn Suspended	The total number of PDU Notification responses received with a failure cause code of 207 (CFH, GPRS connection suspended).
Mandatory IE Incorrect	The total number of PDU Notification responses received with a failure cause code of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of PDU Notification responses received with a failure cause code of 202 (CAH, Mandatory IE incorrect).
Optional IE Incorrect	The total number of PDU Notification responses received with a failure cause code of 203 (CBH, Optional IE incorrect).
Invalid Message Format	The total number of PDU Notification responses received with a failure cause code of 193 (C1H, Invalid message format).
Unknown IMSI	The total number of PDU Notification responses received with a failure cause code of 194 (C2H, IMSI not known).
No Resources	The total number of PDU Notification responses received with a failure cause code of 199 (C7H, No resources available).
PDU Notification Reject Causes	
MS Not GPRS Responding	The total number of PDU Notification responses received with a reject cause code of 196 (C4H, MS is not GPRS Responding).
MS Refuses	The total number of PDU Notification responses received with a reject cause code of 197 (C5H, MS Refuses).
Mandatory IE Incorrect	The total number of PDU Notification responses received with a reject cause code of 201 (C9H, Mandatory IE incorrect).

Field	Description
Mandatory IE Missing	The total number of PDU Notification responses received with a reject cause code of 202 (CAH, Mandatory IE incorrect).
Optional IE Incorrect	The total number of PDU Notification responses received with a reject cause code of 203 (CBH, Optional IE incorrect).
Invalid Message Format	The total number of PDU Notification responses received with a reject cause code of 193 (C1H, Invalid message format).
QoS QCI Stats	
QCI 1	
CPC QoS Accepted	The number of QoS requests with QCI 1 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading.
CPC QoS Downgraded	The number of QoS requests with qci1 coming from CPC were downgraded.
UPC QoS Accepted	The number of QoS requests with qci1 coming from Update PDP Context (UPC) were accepted as it is without any downgrading.
UPC QoS Downgraded	The number of QoS requests with qci1 coming from UPC were downgraded.
QCI 2	
CPC QoS Accepted	The number of QoS requests with qci 2 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading.
CPC QoS Downgraded	The number of QoS requests with qci2 coming from CPC were downgraded.
UPC QoS Accepted	The number of QoS requests with qci 2 coming from Update PDP Context (UPC) were accepted as it is without any downgrading.
UPC QoS Downgraded	The number of QoS requests with qci 2 coming from UPC were downgraded.
QCI 3	
CPC QoS Accepted	The number of QoS requests with qci 3 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading.
CPC QoS Downgraded	The number of QoS requests with qci 3 coming from CPC were downgraded.
UPC QoS Accepted	The number of QoS requests with qci 3 coming from Update PDP Context (UPC) were accepted as it is without any downgrading.
UPC QoS Downgraded	The number of QoS requests with qci 3 coming from UPC were downgraded.
QCI 4	
CPC QoS Accepted	The number of QoS requests with qci 4 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading.
CPC QoS Downgraded	The number of QoS requests with qci 4 coming from CPC were downgraded.
UPC QoS Accepted	The number of QoS requests with qci 4 coming from Update PDP Context (UPC) were accepted as it is without any downgrading.
UPC QoS Downgraded	The number of QoS requests with qci 4 coming from UPC were downgraded.
QCI 5	

Field	Description
CPC QoS Accepted	The number of QoS requests with qci 5 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading.
CPC QoS Downgraded	The number of QoS requests with qci 5 coming from CPC were downgraded.
UPC QoS Accepted	The number of QoS requests with qci 5 coming from Update PDP Context (UPC) were accepted as it is without any downgrading.
UPC QoS Downgraded	The number of QoS requests with qci 5 coming from UPC were downgraded.
QCI 6	
CPC QoS Accepted	The number of QoS requests with qci 6 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading.
CPC QoS Downgraded	The number of QoS requests with qci 6 coming from CPC were downgraded.
UPC QoS Accepted	The number of QoS requests with qci 6 coming from Update PDP Context (UPC) were accepted as it is without any downgrading.
UPC QoS Downgraded	The number of QoS requests with qci 6 coming from UPC were downgraded.
QCI 7	
CPC QoS Accepted	The number of QoS requests with qci 7 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading.
CPC QoS Downgraded	The number of QoS requests with qci 7 coming from CPC were downgraded.
UPC QoS Accepted	The number of QoS requests with qci 7 coming from Update PDP Context (UPC) were accepted as it is without any downgrading.
UPC QoS Downgraded	The number of QoS requests with qci 7 coming from UPC were downgraded.
QCI 8	
CPC QoS Accepted	The number of QoS requests with qci 8 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading.
CPC QoS Downgraded	The number of QoS requests with qci 8 coming from CPC were downgraded.
UPC QoS Accepted	The number of QoS requests with qci 8 coming from Update PDP Context (UPC) were accepted as it is without any downgrading.
UPC QoS Downgraded	The number of QoS requests with qci 8 coming from UPC were downgraded.
QCI 9	
CPC QoS Accepted	The number of QoS requests with qci 9 coming from Create PDP Context (CPC) were accepted, as as it is without downgrading.
CPC QoS Downgraded	The number of QoS requests with qci 9 coming from CPC were downgraded.
UPC QoS Accepted	The number of QoS requests with qci 9 coming from Update PDP Context (UPC) were accepted as it is without any downgrading.
UPC QoS Downgraded	The number of QoS requests with qci 9 coming from UPC were downgraded.
GTPU Receive	
Total Packets	The total number of GTPU packets received.

Field	Description
Total Bytes	The total number of GTPU bytes received.
GTPU Send	
Total Packets	The total number of GTPU packets transmitted.
Total Bytes	The total number of GTPU bytes transmitted.

Chapter 103

show gtp

This chapter includes the **show gtp** command output tables.

show gtp accounting servers

Table 250. show gtp accounting servers Command Output Descriptions

Field	Description
Context Name	The name of the system context in which the CGF is configured.
Primary Accounting server address	The IP address of the CGF.
port	The TCP port over which GTPP messaging is performed.
priority	The configured priority of the CGF.
State	The status of the CGF as Active or Inactive.
Group	The GTPP server group name in which this server is configured.

show gtp counters all

Table 251. show gtp counters all Command Output Descriptions

Field	Description
Outstanding GCDRs	The current total number of G-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding GCDRs	The total number of G-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived GCDRs	The current total number of G-CDRs achieved by CGF.
GCDRs buffered with AAAPROXY	The current total number of G-CDRs buffered by the system's AAA Proxy tasks.
GCDRs buffered with AAAMGR	The current total number of G-CDRs buffered by the system's AAA Manager tasks.
Outstanding MCDRs	The current total number of M-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding MCDRs	The total number of M-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived MCDRs	The current total number of M-CDRs achieved by CGF.
MCDRs buffered with AAAPROXY	The current total number of M-CDRs buffered by the system's AAA Proxy tasks.
MCDRs buffered with AAAMGR	The current total number of M-CDRs buffered by the system's AAA Manager tasks.
Outstanding SCDRs	The current total number of S-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding SCDRs	The total number of S-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived SCDRs	The current total number of S-CDRs achieved by CGF.
SCDRs buffered with AAAPROXY	The current total number of S-CDRs buffered by the system's AAA Proxy tasks.
SCDRs buffered with AAAMGR	The current total number of S-CDRs buffered by the system's AAA Manager tasks.
Outstanding S-SMO-CDRs	The current total number of S-SMO-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding S-SMO-CDRs	The total number of S-SMO-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived S-SMO-CDRs	The current total number of S-SMO-CDRs achieved by CGF.
S-SMO-CDRs buffered with AAAPROXY	The current total number of S-SMO-CDRs buffered by the system's AAA Proxy tasks.
S-SMO-CDRs buffered with AAAMGR	The current total number of S-SMO-CDRs buffered by the system's AAA Manager tasks.

Field	Description
Outstanding S-SMT-CDRs	The current total number of S-SMT-CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding S-SMT-CDRs	The total number of S-SMT-CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived S-SMT-CDRs	The current total number of S-SMT-CDRs achieved by CGF.
S-SMT-CDRs buffered with AAPROXY	The current total number of S-SMT-CDRs buffered by the system's AAA Proxy tasks.
S-SMT-CDRs buffered with AAAMGR	The current total number of S-SMT-CDRs buffered by the system's AAA Manager tasks.
Outstanding GMBH CDRs	The current total number of GMBH CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding GMBH CDRs	The total number of GMBH CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived GMBH CDRs	The current total number of GMBH CDRs achieved by CGF.
GMBH CDRs buffered with AAPROXY	The current total number of GMBH CDRs buffered by the system's AAA Proxy tasks.
GMBH CDRs buffered with AAAMGR	The current total number of GMBH CDRs buffered by the system's AAA Manager tasks.
Outstanding SGW CDRs	The current total number of S-GW CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding SGW CDRs	The total number of S-GW CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived SGW CDRs	The current total number of S-GW CDRs achieved by CGF.
WLAN CDRs buffered with AAPROXY	The current total number of WLAN CDRs buffered by the system's AAA Proxy tasks.
WLAN CDRs buffered with AAAMGR	The current total number of WLAN CDRs buffered by the system's AAA Manager tasks.
SGW CDRs buffered with AAPROXY	The current total number of S-GW CDRs buffered by the system's AAA Proxy tasks.
SGW CDRs buffered with AAAMGR	The current total number of S-GW CDRs buffered by the system's AAA Manager tasks.
Outstanding SMBMS CDRs	The current total number of SMBMS CDRs sent to the CGF(s) for which no response was received.
Possibly Duplicate Outstanding SMBMS CDRs	The total number of SMBMS CDRs sent to the CGF(s) with a packet transfer command of "Send Possibly Duplicated Data Record Packet"
Archived SMBMS CDRs	The current total number of SMBMS CDRs achieved by CGF.
SMBMS CDRs buffered with AAPROXY	The current total number of SMBMS CDRs buffered by the system's AAA Proxy tasks.

Field	Description
SMBMS CDRs buffered with AAAMGR	The current total number of SMBMS CDRs buffered by the system's AAA Manager tasks.

show gtp group

Table 252. show gtp group Command Output Descriptions

Field	Description
Group name	The GTP server group name.
Context	The context name of the configured GTP group.
CDR timeout	Indicates the configured timeout duration in seconds for CDRs.
CDR max-retries	Indicates the configured maximum retries for CDR.
ECHO timeout	Indicates the configured timeout duration in seconds for ECHO message.
ECHO max-retries	Indicates the configured maximum retries for ECHO message.
Dead time	Indicates the dead time for specific GTP group.
Detect-dead-server consecutive-failures	Indicates the total consecutive failure of dead server detection probe.
Duplicate-hold-time minutes	Configured time in minutes to hold duplicate CDRs.
Redirection allowed	Indicates whether redirection is allowed or not.
Source-port-validation	Indicates whether source port validation is enabled or not.
Charging-agent address	Indicates the IP address of configured charging agent.
Charging-agent port	Indicates the port number of configured charging agent.
Max CDR size	Indicates the maximum CDR size allowed in bytes.
Max CDRs in msg	Indicates the maximum CDRs allowed in a message.
Max CDRs wait-time	Indicates the maximum wait/live time allowed for CDRs.
Dictionary	Indicates the applicable GTP dictionary for CDR encoding.
Data-req start seq-num	Indicates the starting sequence number of data request message.
Storage Server	This group indicates the storage server information if CDR storage mode is remote. This counter is applicable for the ASR 5000 only.
Mode	Indicates the mode of the CDR storage. Possible modes are: • Local: CDRs stored on local HDD on SMC card. • Remote: CDRs stored on remote GSS server. This counter is applicable for the ASR 5000 only.
Storage-server address	Indicates the configured GTP storage server IP address.
Storage-server port	Indicates the port number of configured GTP storage server.
Storage-server timeout	Indicates the timeout in seconds configured for GTP storage server.

Field	Description
Storage-server max-retries	Indicates the maximum retries configured for the GSS messages.
Local Storage	This group indicates the storage server information, if CDR storage mode is local. This counter group is applicable for the ASR 5000 only.
AAAmgr Wait Time	Indicates the time in seconds that AAAmgr has to wait trying to accumulate 255 CDRs.
File rotation volume-limit	Indicates the volume of CDR file in MB after which CDR file rotation will happen. This counter group is applicable for the ASR 5000 only.
File rotation CDR-count	Indicates the number of CDRs to include in a CDR file after which CDR file rotation will happen. This counter group is applicable for the ASR 5000 only.
File rotation time-interval	Indicates the time duration in seconds after which CDR file rotation will happen. This counter group is applicable for the ASR 5000 only.
Force File rotation by time-interval	Indicates whether force file rotation is enabled or not. If this is enabled it forces the system for file-rotation at specified interval even if there are no CDRs generated.
File compression	Indicates the whether file compression is configured or not on CDR files. This counter group is applicable for the ASR 5000 only.
File format	Indicates the format name of file to store CDRs in specified format in CDR file. This counter group is applicable for the ASR 5000 only.
Purge-processed-files	Indicates the configuration of purge interval duration of processed files. This is an optional setting and can be configured with purge-interval <i>purge_dur</i> keyword with gtp storage-server local file purge-processed-files command in GTPP Group Configuration Mode.
Attributes	
Diagnostics present	Indicates whether or not the "Diagnostics" attribute is present in the CDR.
Node ID present	Indicates whether or not the "Node ID" attribute is present in the CDR.
Charging-Char sel mode present	Indicates whether or not the "Charging Characteristic Selection Mode" attribute is present.
MSISDN present	Indicates whether or not the MSISDN attribute is present.
IMEI present	Indicates whether or not the IMEI attribute is present.
RAT present	Indicates whether or not the RAT attribute is present.
Duration in milliseconds	Indicates the configured duration in milliseconds.
PLMN-id present	Indicates whether or not the public land mobile network identifier attribute is present in the CDR.
PLMN-id unknown-use	Indicates whether a public land mobile network identifier which is of unknown use is present in the CDR.
Local-rec-seq-num present	Indicates whether or not the local record sequence number attribute is present.
Node-id suffix	Indicates whether or not the server node id attribute is present in the CDR.
Cell-plmn-id	Indicates whether cell public land mobile network identifier attribute is present or not.

Field	Description
Sms	Indicates the SMS attribute information.
Recording entity	Indicates whether or not the SMS recording entity is present in the attribute.
Service centre	Indicates whether or not the SMS service center information is present in the attribute.
Destination number	Indicates whether the destination number for SMS is present in the attribute.
Record extensions:	Indicates the information for record extensions.
Rat	Indicates whether radio access type information is present in record extension attributes or not.
Triggers	
Volume-limit	Indicates the status of configured volume limit trigger. Possible status are: • Enabled • Disabled
Time-limit	Indicates the status of configured time limit trigger. Possible status are: • Enabled • Disabled
Tariff-time-change	Indicates the status of configured trigger for tariff time change. Possible status are: • Enabled • Disabled
Serving-Node-change-limit	Indicates the status of configured trigger for SGSN change limit. Possible status are: • Enabled • Disabled
Intra-SGSN-group-change	Indicates the status of configured trigger for intra-SGSN group change. Possible status are: • Enabled • Disabled
Inter-plmn-sgsn-change	Indicates the status of configured trigger for SGSN change between PLMN. Possible status are: • Enabled • Disabled
Egcdr-max-losdv-limit	Indicates the status of configured trigger for maximum list of service data volume (LoSDV) limit for eG-CDRs. Possible status are: • Enabled • Disabled
Qos-change	Indicates the status of configured trigger for QoS change. Possible status are: • Enabled • Disabled

Field	Description
RAT-change	Indicates the status of configured trigger for RAT change. Possible status are: • Enabled • Disabled
MS-timezone-change	Indicates the status of configured trigger for change in time zone of MS. Possible status are: • Enabled • Disabled
Routing-area-update	Indicates the status of configured trigger for update in routing area. Possible status are: • Enabled • Disabled
Direct-tunnel	Indicates the status of configured trigger for direct tunnel. Possible status are: • Enabled • Disabled
Mbms config	Specifies the MBMS configuration information.
Buckets	Indicates the total number of data buckets configured for MBMS service.
Interval	Indicates the interval duration configured for MBMS service.
Volume	Indicates the data volume configured for MBMS service.
Tarif:	Specifies the tariff configuration for MBMS service.
Time1	Indicates the tariff configuration for time slot 1 in MBMS service.
Time2	Indicates the tariff configuration for time slot 2 in MBMS service.
Time3	Indicates the tariff configuration for time slot 3 in MBMS service.
Time4	Indicates the tariff configuration for time slot 4 in MBMS service.
EGCDR	Specifies the configuration for eG-CDRs.
Lotdv-max-containers	Indicates the maximum number of containers configured for list of traffic data volume (LoTDV) for eG-CDRs.
Losdv-max-containers	Indicates the maximum number of containers configured for list of service data volume (LoSDV) for eG-CDRs.
Service-idle-timeout	Indicates the idle timeout duration configured in seconds for service for eG-CDRs.
Rulebase-max-length	Indicates the maximum character length of charging rulebase name in LOSDV, if configured to a non-zero value.
Service-interval	Indicates whether interval duration configured in seconds to retry for eG-CDRs.
Service-uplink	Indicates the total bytes uplinked for service in eG-CDRs.
Service-downlink	Indicates the total bytes downlinked for service in eG-CDRs.
Service-total	Indicates the total bytes in traffic (uplinked+ downlinked) for service in eG-CDRs.
Closing-cause-unique	Indicates whether any unique closing cause set for eG-CDR closing.

Field	Description
Include-all-losdvs	Indicates whether eG-CDR configured to include all LoSDV.
Delete-service-thresholds	indicates the configured threshold in eG-CDR to delete the service.

show gtp statistics

Table 253. show gtp statistics Command Output Descriptions

Field	Description
Accumulated Statistics	
Start Collection Req	Total number of Start Collection requests.
Normal Release Req	Total number of Normal Release requests.
Management Intervention Req	Total number of Management Intervention requests.
Abnormal Release Req	Total number of Abnormal Release requests.
Time Limit Req	Total number of Time Limit requests.
Volume Limit Req	Total number of Volume Limit requests.
SGSN Change Req	Total number of SGSN Change requests.
Maximum Change Condition Req	Total number of Maximum Change Condition requests.
RAT Change Req	Total number of RAT Change requests.
MS Time Zone Change Req	Total number of MS Time Zone Change requests.
List of Down Stream Node Change	List of down-stream node change.
Intra SGSN Intersystem Change Req	Total number of Intra SGSN Intersystem Change requests.
FOCS/ODB ACL Violation Req	Indicates the total number of FOCS enabled sessions closed due to ACL rule violation received for FOCS and/or ODB.
Inactivity Timeout (FOCS enabled):	Indicates the total number of FOCS enabled sessions closed due to inactivity timeout.
Total G-CDR transmission	Total number of G-CDR transmissions.
Total S-CDR transmission	Total number of S-CDR transmissions.
Total M-CDR transmission	Total number of M-CDR transmissions.
Total S-SMO-CDR transmission	Total number of S-SMO-CDR transmissions.
Total S-SMT-CDR transmission	Total number of S-SMT-CDR transmissions.
Total G-MB-CDR transmission	Total number of G-MB-CDR transmissions.
Total SGW-CDR transmission	Total number of SGW-CDR transmissions.
WLAN-CDR transmission	Total number of WLAN-CDR transmissions.
Total G-CDR retransmission	Total number of G-CDR retransmissions.

Field	Description
Total S-CDR retransmission	Total number of S-CDR retransmissions.
Total M-CDR retransmission	Total number of M-CDR retransmissions.
Total S-SMO-CDR retransmission	Total number of S-SMO-CDR retransmissions.
Total S-SMT-CDR retransmission	Total number of S-SMT-CDR retransmissions.
Total SGW-CDR retransmission	Total number of SGW-CDR retransmissions.
WLAN-CDR retransmission	Total number of WLAN-CDR retransmissions.
Total G-MB-CDR retransmission	Total number of G-MB-CDR retransmissions.
Total G-CDR accepted	Total number of G-CDR accepted.
Total S-CDR accepted	Total number of S-CDR accepted.
Total M-CDR accepted	Total number of M-CDR accepted.
Total S-SMO-CDR accepted	Total number of S-SMO-CDR accepted.
Total S-SMT-CDR accepted	Total number of S-SMT-CDR accepted.
Total G-MB-CDR accepted	Total number of G-MB-CDR accepted.
Total SGW-CDR accepted	Total number of SGW-CDR accepted.
WLAN-CDR accepted	Total number of WLAN-CDR accepted.
Total G-CDR transmission failures	Total number of G-CDR transmission failures.
Total S-CDR transmission failures	Total number of S-CDR transmission failures.
Total M-CDR transmission failures	Total number of M-CDR transmission failures.
Total S-SMO-CDR transmission failures	Total number of S-SMO-CDR transmission failures.
Total S-SMT-CDR transmission failures	Total number of S-SMT-CDR transmission failures.
Total G-MB-CDR transmission failures	Total number of G-MB-CDR transmission failures.
Total SGW-CDR transmission failures	Total number of SGW-CDR transmission failures.
WLAN-CDR transmission failures	Total number of WLAN-CDR transmissions failures.
G-CDR transmission failure percent	G-CDR transmission failure percentage.

Field	Description
S-CDR transmission failure percent	S-CDR transmission failure percentage.
M-CDR transmission failure percent	M-CDR transmission failure percentage.
S-SMO-CDR transmission failure percent	S-SMO-CDR transmission failure percentage.
S-SMT-CDR transmission failure percent	S-SMT-CDR transmission failure percentage.
G-MB-CDR transmission failure percent	G-MB-CDR transmission failure percentage.
Total SGW-CDR transmission failure percent	Total number of SGW-CDR transmission failure percentage.
WLAN-CDR transmission failure percent	Total number of WLAN-CDR transmissions failure percentage.
CDRs purged by dead-server suppress-cdrs	Total number of CDRs purged in all GTPP server groups configured on system when gtp dead-server suppress-cdrs command is enabled.
Charging Characteristics Statistics	
Hot	The charging characteristic setting.
Normal	The charging characteristic setting.
Prepaid	The charging characteristic setting.
Flat	The charging characteristic setting.
Unknown	The charging characteristic setting.
CGF Specific Statistics	
Data Record Transfer Requests Sent When the primary CGF goes down, all outstanding requests with the primary CGF are marked as Possibly Duplicate and sent to the secondary CGF. This is because of the uncertainty as to whether the primary CGF processed the requests or not. So the seq-numbers (for primary CGF) for these requests are stored. When the primary CGF comes back again, an Empty DRT with the stored seq-numbers is sent to the primary CGF. The CGF can reply either REQ_ALREADY_FULFILLED (primary CGF processed the request. Cancel request is sent to the secondary CGF to delete the request) or REQUEST_ACCEPTED (primary CGF has not got this request before. Release request is sent to secondary to store the request).	
Send	Total number of DRT requests sent.
Possibly Duplicate	Total number of possibly duplicate DRT requests sent.
Cancel	Total number of cancel DRT requests sent.
Release	Total number of release DRT requests sent.
Empty	Total number of empty DRT requests sent.
Data Record Transfer Requests Retrieved	
Send	Total number of DRT request retrieved.

Field	Description
Possibly Duplicate	Total number of DRT requests marked possibly duplicate retried.
Cancel	Total number of cancel DRT requests retried.
Release	Total number of release DRT requests retried.
Empty	Total number of empty DRT requests retried.
Data Record Transfer Requests Success	
Send	Total number of DRT requests sent successfully.
Possibly Duplicate	Total number of DRT requests marked possibly duplicate sent successfully.
Cancel	Total number of canceled DRT requests sent successfully.
Release	Total number of release DRT requests sent successfully.
Empty	Total number of empty DRT requests sent successfully.
Data Record Transfer Response Cause	
Accepted	Total number of DRT response messages with cause as “accepted”.
Not Fulfilled	Total number of DRT response messages with cause as “not fulfilled”.
Already Fulfilled	Total number of DRT response messages with cause as “already fulfilled”.
Dup Already Fulfilled	Total number of DRT response messages with cause as “duplicate already fulfilled”.
Invalid Msg Format	Total number of DRT response messages with cause as “invalid message format”.
Mandatory IE Missing	Total number of DRT response messages with cause as “mandatory IE missing”.
Service not supported	Total number of DRT response messages with cause as “service not supported”.
Version not supported	Total number of DRT response messages with cause as “version not supported”.
Mandatory IE incorrect	Total number of DRT response messages with cause as “mandatory IE incorrect”.
Optional IE incorrect	Total number of DRT response messages with cause as “optional IE incorrect”.
No Resources	Total number of DRT response messages with cause as “no resources”.
System Failure	Total number of DRT response messages with cause as “system failure”.
CDR Decode Error	Total number of DRT response messages with cause as “CDR decode error”.
Seq No incorrect	Total number of DRT response messages with cause as “sequence number incorrect”.
Unknown Cause	Total number of DRT response messages with unknown cause.
GTP Echo Messages	
Echo Req Sent	Total number of echo request messages sent.
Echo Req Rcvd	Total number of echo request messages received.
Echo Rsp Rcvd	Total number of echo response messages received.
Echo Rsp Sent	Total number of echo response messages sent.
Redirection Req/Rsp Messages	

Field	Description
Redirection Req Rcvd	Total number of redirection request messages received.
Redirection Rsp Sent	Total number of redirection response messages sent.
Redirection Request Cause	
Trans Buffer full	Total number of redirection requests with cause code as “transmit buffers are full”.
Recv Buffer Full	Total number of redirection requests with cause code as “receive buffers are full”.
Other Node Down	Total number of redirection requests with cause code as “other node is about to go down”.
Self Node down	Total number of redirection requests with cause code as “this node is about to go down”.
System Failure	Total number of redirection requests with cause code as “system failure”.
Redirection Response Cause	
Accepted	Total number of redirection responses with cause code as “accepted”.
Service Not Supported	Total number of redirection responses with cause code as “service not supported”.
System Failure	Total number of redirection responses with cause code as “system failure”.
Mandatory IE Incorrect	Total number of redirection responses with cause code as “mandatory IE incorrect”.
Mandatory IE Missing	Total number of redirection responses with cause code as “mandatory IE missing”.
Optional IE incorrect	Total number of redirection responses with cause code as “optional IE incorrect”.
Invalid Msg Format	Total number of redirection responses with cause code as “invalid message format”.
Version Not Supported	Total number of redirection responses with cause code as “version not supported”.
No Resources	Total number of redirection responses with cause code as “no resources”.
Node Alive Req/Rsp Messages	
Node Alive Req Rcvd	Total number of node alive request messages received.
Node Alive Req Sent	Total number of node alive request messages sent.
Node Alive Rsp Sent	Total number of node alive response messages sent.
Node Alive Rsp Rcvd	Total number of node alive response messages received.
Invalid messages received	
Invalid Sequence Number	Total number of messages with invalid sequence number received.
Unknown CGF	Total number of messages received with unknown CGF.
Unknown Msg type	Total number of messages received with unknown message type.
Round Trip Time	
Last DRT Round Trip Time	Time taken for the last DRT round trip.
Average DRT Round Trip Time	Average time taken for DRT round trip.

show gtp statistics cgf-address

Table 254. show gtp statistics cgf-address Command Output Descriptions

Field	Description
Accumulated Statistics	
Start Collection Req	The total number of accounting start requests generated. NOTE: These requests are not sent to CGF. The requests are just a system record that accounting for a session has started and in future releases may be required to be sent to CGF.
Normal Release Req	The total number of requests generated because of normal PDP context deletion (i.e. PDP context deletion initiated by SGSN or GGSN).
Management Intervention Req	The total number of requests generated because of management intervention (request due to O&M reasons, e.g. clear subscribers all)
Abnormal Release Req	The total number of requests generated because of abnormal termination of session (e.g. Session Manager failure results in abnormal release of PDP contexts active for that Session Manager).
Time Limit Req	The number of interim requests generated because of the time limit being reached. The time limit is configured using the cc profile command in the GGSN service configuration mode.
Volume Limit Req	The number of interim requests generated because of volume limit being reached. The volume limit is configured using cc profile command in the GGSN service configuration mode.
SGSN Change Req	The number of interim requests generated because of the number of inter SGSN switch-overs reaching the configured limit or because of an SGSN switchover resulting in a new RAI (Routing Area Identity). The maximum number of SGSN changes is configured using the cc profile command in the GGSN service configuration mode.
Maximum Change Condition Req	The number of interim requests generated because of the "List of traffic Volume" Containers reaching the configured limit. This value is configured using the cc profile command in the GGSN service configuration mode.
Total G-CDR transmission	The total number of GTPP Requests sent to the CGF. NOTE: This counter does not include requests re-transmitted to the CGF.
Total G-CDR retransmission	The total number of GTPP Requests retransmitted to the CGF. NOTE: This counter does not include the requests that were originally transmitted to the CGF.
Total G-CDR accepted	The total number of G-CDRs accepted by the CGF.
Total G-CDR transmission failures	The total number of GTPP Requests that were not responded to by CGFs. NOTE: This statistic is not displayed if the cgf_address optional keyword is used.
G-CDR transmission failure percent	The failure percentage of DRT requests. This is calculated as (Total G-CDR Trans failures / (Total G-CDR Trans Failures + Total G-CDR accepted) * 100).
Charging Characteristics Statistics	
Hot	The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "1", representing "hot" billing.

Field	Description
Normal	The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "8", representing "normal" billing.
Prepaid	The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "4", representing "prepaid billing".
Flat	The number of times that PDP Context Requests were processed with a charging characteristic profile index value of "2", representing "flat-rate" billing.
Unknown	The number of times that PDP Context Requests were processed with an unknown charging characteristic profile index value.
CGF Specific Statistics	
Data Record Transfer Requests Sent	
Send	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet". NOTE: This counter counts "Send Data Record Packet" with length more than 0.
Possibly Duplicate	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send possibly duplicated Data Record Packet".
Cancel	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Cancel Data Record Packet".
Release	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Release Data Record Packet".
Empty	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet". NOTE: This counter counts "Send Data Record Packet" with length equal to 0.
Data Record Transfer Requests Retried	
Send	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet". NOTE: This counter counts "Send Data Record Packet" with length more than 0.
Possibly Duplicate	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Send possibly duplicated Data Record Packet".
Cancel	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Cancel Data Record Packet".
Release	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Release Data Record Packet".
Empty	The total number of re-transmitted "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet". NOTE: This counter counts "Send Data Record Packet" with length equal to 0.
Data Record Transfer Requests Success	
Send	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet" for which a response from the CGF was received. NOTE: This counter counts "Send Data Record Packet" with length more than 0.

Field	Description
Possibly Duplicate	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send possibly duplicated Data Record Packet" for which a response from the CGF was received.
Cancel	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Cancel Data Record Packet" for which a response from the CGF was received.
Release	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Release Data Record Packet" for which a response from the CGF was received.
Empty	The total number of "Data Record Transfer Requests" sent with the Packet transfer command "Send Data Record Packet" for which a response from the CGF was received. NOTE: This counter counts "Send Data Record Packet" with length equal to 0.
Data Record Transfer Response Cause	
Accepted	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 128 (80H, Request accepted).
Not Fulfilled	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 255 (FFH, Request not fulfilled).
Already Fulfilled	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 253 (FDH, Request already fulfilled).
Dup Already Fulfilled	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 252 (FCH, Request related to possibly duplicated packets already fulfilled).
Invalid Msg Format	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 193 (C1H, Invalid message format).
Mandatory IE Missing	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 202 (CAH, Mandatory IE missing).
Service not supported	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 200 (C8H, Service not supported).
Version not supported	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 198 (C6, Version not supported).
Mandatory IE incorrect	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 201 (C9H, Mandatory IE incorrect).
Optional IE incorrect	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 203 (CBH, Optional IE incorrect).
No Resources	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 199 (C7H, No resources available).
System Failure	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 204 (CCH, System failure).
CDR Decode Error	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 177. The cause value "CDR decoding error" is primarily intended to inform the CDR generating node that the receiving node can not decode the CDR.
Seq No incorrect	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code of 254.

Field	Description
Unknown Cause	The total number of Data Record Transfer Response messages received from the CGF that indicated a cause code which is other than mentioned above.
GTP Echo Messages	
Echo Req Sent	The total number of Echo Request messages transmitted to the CGF.
Echo Req Rcvd	The total number of Echo Request messages received from the CGF.
Echo Rsp Rcvd	The total number of Echo Response messages received from the CGF.
Echo Rsp Sent	The total number of Echo Response messages transmitted to the CGF.
Redirection Req/Rsp Messages	
Redirection Req Rcvd	The total number of Redirection Request messages received from the CGF.
Redirection Rsp Sent	The total number of Redirection Response messages transmitted to the CGF.
Redirection Request Cause	
Trans Buffer full	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 60 (3CH, The transmit buffers are becoming full).
Recv Buffer Full	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 61 (3DH, The receive buffers are becoming full).
Other Node Down	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 62 (3EH, Another node is about to go down).
SelfNode down	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 63 (3FH, This node is about to go down).
System Failure	The total number of Redirection Request messages received from the CGF(s) containing a cause information element of 59 (3BH, System failure).
Redirection Response Cause	
Accepted	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 128 (80H, Request accepted).
Service Not Supported	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 200 (C8H, Service not supported).
System Failure	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 204 (CCH, System failure).
Mandatory IE Incorrect	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 201 (C9H, Mandatory IE incorrect).
Mandatory IE Missing	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 202 (CAH, Mandatory IE missing).
Optional IE incorrect	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 203 (CBH, Optional IE incorrect).
Invalid Msg Format	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 193 (C1H, Invalid message format).

Field	Description
Version Not Supported	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 198 (C6H, Version not supported).
No Resources	The total number of Redirection Response messages transmitted to the CGF(s) containing a cause information element of 199 (C7H, No resources available).
Node Alive Req/Rsp Messages	
Node Alive Req Rcvd	The total number of Node Alive Request messages received.
Node Alive Rsp Sent	The total number of Node Alive Response messages transmitted.
Node Alive Req Sent	The total number of Node Alive Request messages sent.
Node Alive Rsp Rcvd	The total number of Node Alive Response messages received.
Invalid messages received	
Invalid Sequence Number	The total number of requests received from a pre-configured CGF, with sequence number that is not in the system's buffers.
Round Trip Time	This section shows average latency on Ga/Gz interface per CGF.
Last DRT Round Trip Time	Total time taken in milliseconds for round trip of previous data record transfer message.
Average DRT Round Trip Time	Average time taken in milliseconds for round trip of all data record transfer messages.

show gtp storage-server statistics

Table 255. show gtp storage-server statistics Command Output Descriptions

Field	Description
Store Requests (GTPP Requests)	
Sent	The total number of GTPP Requests Messages sent by AAAProxy to GSS for storage. Each GTPP Request corresponds to one Store request to GSS. Therefore, each store request may contain one or more GCDR.
Retried	The total number of GTPP Requests Messages re-sent by AAAProxy to GSS for storage.
Success	The total number of GTPP Requests Messages successfully sent by AAAProxy to GSS for storage.
Failed	The total number of GTPP Requests Messages that failed to be sent by AAAProxy to GSS for storage.
Store Requests (GCDRs)	
Sent	The total number of G-CDRs in the GTPP Requests sent for "store".
Retried	The total number of G-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of G-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of G-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (MCDRs)	
Sent	The total number of M-CDRs in the GTPP Requests sent for "store".
Retried	The total number of M-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of M-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of M-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (SCDRs)	
Sent	The total number of S-CDRs in the GTPP Requests sent for "store".
Retried	The total number of S-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of S-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of S-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (S-SMO-CDRs)	
Sent	The total number of S-SMO-CDRs in the GTPP Requests sent for "store".
Retried	The total number of S-SMO-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of S-SMO-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of S-SMO-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (S-SMT-CDRs)	

Field	Description
Sent	The total number of S-SMT-CDRs in the GTPP Requests sent for "store".
Retried	The total number of S-SMT-CDRs in the GTPP Requests re-sent for "store".
Success	The total number of S-SMT-CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of S-SMT-CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests(GMBMSCDRs)	
Sent	The total number of GMBMS CDRs in the GTPP Requests sent for "store".
Retried	The total number of GMBMS CDRs in the GTPP Requests re-sent for "store".
Success	The total number of GMBMS CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of GMBMS CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests(SMBMSCDRs)	
Sent	The total number of SMBMS CDRs in the GTPP Requests sent for "store".
Retried	The total number of SMBMS CDRs in the GTPP Requests re-sent for "store".
Success	The total number of SMBMS CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of SMBMS CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (SGWCDRs)	
Sent	The total number of S-GW CDRs in the GTPP Requests sent for "store".
Retried	The total number of S-GW CDRs in the GTPP Requests re-sent for "store".
Success	The total number of S-GW CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of S-GW CDRs in the GTPP Requests that failed to be sent for "store".
Store Requests (WLANCDRs)	
Sent	The total number of WLAN CDRs in the GTPP Requests sent for "store".
Retried	The total number of WLAN CDRs in the GTPP Requests re-sent for "store".
Success	The total number of WLAN CDRs in the GTPP Requests successfully sent for "store".
Failed	The total number of WLAN CDRs in the GTPP Requests that failed to be sent for "store".
AAAProxy Recover Requests	
Sent	The total number of AAA Proxy Recover Requests sent by the AAA Proxy to the GSS. These requests are sent when the AAA Proxy is restarted after an outage.
Retried	The total number of AAA Proxy Recover Requests re-sent by the AAA Proxy to the GSS.
Success	The total number of AAA Proxy Recover Requests successfully sent by the AAA Proxy to the GSS.
Failed	The total number of AAA Proxy Recover Requests that failed to be sent by the AAA Proxy to the GSS.
Get Next Requests	

Field	Description
Sent	The total number of Get Next requests sent by the AAA Proxy to the GSS. The AAA Proxy maintains a limited buffer. When the buffer gets filled because of a delay in the CGF response, the AAA proxy starts sending the request to the GSS. To get these requests from the GSS, the AAA Proxy sends Get Next Requests to the GSS.
Retried	The total number of Get Next requests re-sent by the AAA Proxy to the GSS.
Success	The total number of Get Next requests successfully sent by the AAA Proxy to the GSS.
Failed	The total number of Get Next requests that failed to be sent by the AAA Proxy to the GSS.
Update CGF Requests	
Sent	The total number of requests sent by the AAA Proxy to the GSS to indicate a change in the status of the CGFs (i.e. from up to down or vice versa).
Retried	The total number of requests re-sent by the AAA Proxy to the GSS to indicate a change in the status of the CGFs
Success	The total number of requests successfully sent by the AAA Proxy to the GSS to indicate a change in the status of the CGFs
Failed	The total number of requests that failed to be sent by the AAA Proxy to the GSS to indicate a change in the status of the CGFs
AAAMgr Recover Requests	
Sent	The total number of AAAMGR Recovery Requests sent by the system to the GSS. These requests are sent when a AAA Mgr software task is restarted after an outage.
Retried	The total number of AAAMGR Recovery Requests re-sent by the system to the GSS.
Success	The total number of AAAMGR Recovery Requests successfully sent by the system to the GSS.
Failed	The total number of AAAMGR Recovery Requests that failed to be sent by the system to the GSS.
Clear DataBase Requests	
Sent	The total number of Clear Database Requests sent by the AAA Proxy to the GSS. These requests are sent after the AAA Proxy discovers that the GSS has come up again after a period of dormancy (i.e. the GSS moves from "down" to "up" state) so as to bring the GSS in sync with the state that the AAA Proxy is in.
Retried	The total number of Clear Database Requests re-sent by the AAA Proxy to the GSS.
Success	The total number of Clear Database Requests successfully sent by the AAA Proxy to the GSS.
Failed	The total number of Clear Database Requests that failed to be sent by the AAA Proxy to the GSS.
GCDR Purge Requests	
Received	The total number of G-CDR Purge Request messages received by the storage server. This request is sent by the GSS notifying the AAA Proxy of the purging of GTPP Requests due to buffer overflow.
Responded	The total number of responses sent from the AAA Proxy to the GSS in response to "purge Requests".
Generated File Requests	
Received	The total number of Generate File Request messages received by the storage server. This request is sent by the GSS notifying the AAA Proxy of the generation of unAcked files. The GTPP Requests purged by the GSS as a result of buffer overflow are moved to a file. This request indicates the completion of the moving of purged G-CDRs to the file.

Field	Description
Responded	The total number of responses sent by the AAA Proxy to the GSS for the "Generated File Requests" received.
Notification Received	
Outstanding GCDRs	The total number of notification for outstanding G-CDRs.
Responded	The total number notifications received and responded for outstanding G-CDRs.
Outstanding GCDRs cleared	The total number of notification for cleared outstanding G-CDRs.
Responded	The total number notifications received and responded for clearing outstanding G-CDRs.
CPU Usage Overlimit	The total number of notification received for CPU usage overlimit.
Responded	The total number notifications received and responded for CPU usage overlimit.
CPU Usage Normal	The total number of notification received for normal usage of CPU.
Responded	The total number of notification received and responded for normal usage of CPU.
Disk Usage Overlimit	The total number of notification received for disk usage overlimit.
Responded	The total number notifications received and responded for disk usage overlimit.
Disk Usage Normal	The total number of notification received for disk usage is in normal limit.
Responded	The total number notifications received and responded for disk usage in normal limit.
Cluster State Change	The total number of notification received for change in Cluster node status.
Responded	The total number notifications received and responded for change in Cluster node status.
Cluster Switchover	The total number of notification received for Cluster nodes switchover.
Responded	The total number notifications received and responded for Cluster nodes switchover.
Cluster Disk Path Failure	The total number of notification received for failure in Cluster disk path failure.
Responded	The total number notifications received and responded for failure in Cluster disk path failure.
Cluster Disk Path Normal	The total number of notification received for change in Cluster disk path from failure to normal.
Responded	The total number notifications received and responded for change in Cluster disk path from failure to normal.
Cluster Interconnect Failure	The total number of notification received for failure of interconnection between Cluster nodes.
Responded	The total number notifications received and responded for failure of interconnection between Cluster nodes.

Field	Description
Cluster Interconnect Normal	The total number of notification received for change in interconnection between Cluster nodes from failure to normal.
Responded	The total number notifications received and responded for change in interconnection between Cluster nodes from failure to normal.
Cluster Interface Failure	The total number of notification received for failure of interface of Cluster node.
Responded	The total number notifications received and responded for failure of Cluster node interface.
Cluster Interface Normal	The total number of notification received for change in status of Cluster node interface from failure to normal.
Responded	The total number notifications received and responded for change in status of Cluster node interface from failure to normal.
Cluster Memory Low	The total number of notification received for low memory at Cluster node.
Responded	The total number notifications received and responded for low memory at Cluster node.
Cluster Memory Normal	The total number of notification received for change in status of low memory to normal memory at Cluster node.
Responded	The total number notifications received and responded for change in status of low memory to normal memory at Cluster node.
Storage Server Counter Requests	
Sent	The total number of times the AAA Proxy sent "Storage Server Counter" requests to the GSS. This request is sent when "show gtp storage-server counter" CLI is executed.
Failed	The total number of times that the AAA Proxy failed to be send "Storage Server Counter" requests to the GSS.
Success	The total number of times the AAA Proxy successfully sent "Storage Server Counter" requests to the GSS.
Storage Server Status Requests	
Sent	The total number of times the AAA Proxy sent "Storage Server Status" requests to the GSS. This request is sent when "show gtp storage-server status" CLI is executed.
Failed	The total number of times that the AAA Proxy failed to be send "Storage Server Status" requests to the GSS.
Success	The total number of times the AAA Proxy successfully sent "Storage Server Status" requests to the GSS.
Fetch Requests	
Sent	The total number of "Fetch Requests" sent by the AAA Proxy to the GSS. This request is sent to discover the status of a particular GTPP Request (i.e. if it has been successfully stored but not sent to CGF, or if it is successfully stored and sent to CGF, or if it has not been received by GSS at all).
Retried	The total number of "Fetch Requests" re-sent by the AAA Proxy to the GSS.
Success	The total number of "Fetch Requests" successfully sent by the AAA Proxy to the GSS.
Failed	The total number of "Fetch Requests" that failed to be sent by the AAA Proxy to the GSS.

Field	Description
Echo Requests	
Sent	The total number of Echo requests sent by the AAA Proxy to the GSS.
Success	The total number of Echo requests successfully sent by the AAA Proxy to the GSS.
Commit Requests	
Sent	The total number of "commit requests" sent by the AAA Proxy to the GSS. This request is sent as a result of executing the "gtp force-save" Exec mode command.
Success	The total number of "commit requests" successfully sent by the AAA Proxy to the GSS.
Update Requests	
Sent	The total number of requests sent by the AAA Proxy to the GSS to indicate the success of a request from the CGF.
Invalid Request	
Received	The total number of invalid requests sent by the GSS to the AAA Proxy (i.e. when a GSS is reconfigured, all the requests from the old GSS are marked as invalid).
Message Statistics	
Total Req Sent	The total number of requests sent to GSS.
Total Store Req Sent	The total number of requests sent to GSS to store G-CDRs.
Total Rsp Rcvd	The total number of requests responded to GSS.
Total Store Req Sent	The total number of requests to store G-CDRs responded.
Total NotifMsg Rcvd	The total number of notification messages received.
Total NotifRsp Sent	The total number of notification messages responded.
Total Req Sent Failure	The total number of requests failed during sent.
Invalid Socket State	The total number of requests failed during sent due to invalid socket state.
MED/Socket Tx Failure	The total number of requests failed during sent due to Tx failure of mediation or socket.
Store Response Time Statistics	Statistical information of response time for STORE messages.
Get Next Response Time Statistics	Statistical information of response time of GET NEXT messages.
GCDR distribution in DRT Messages	Distribution of G-CDRs in Data Request Transfer (DRT) messages.

show gtp storage-server counters

Table 256. show gtp storage-server counters Command Output Descriptions

Field	Description
Archived GTP Requests	The total number of GTP Requests archived with the GSS that have been responded to by the CGF.
Archived Unack GTP Requests	The total number of GTP Requests archived with the GSS that have not yet been responded to by the CGF.
Archived GCDRs	The total number of G-CDRs archived in "Acknowledged GTP Requests".
Archived Unack GCDRs	The total number of G-CDRs archived in "Unacknowledged GTP Requests".

show gtp storage-server local file counters

Table 257. show gtp storage-server local file counters Command Output Descriptions

Field	Description
GTPP Req pending write	The total number of pending GTPP requests to write files to the hard disk..
GTPP Req pending response	The total number responses sent to GTPP requests.
File related counters	
Current file CDR count	The total number of files compressed.
Files pending sync	The number of files that were not able to be compressed.
Compr files pending sync	The number of files waiting to be synced.
Compression in progress	The number of files being compressed.

show gtp storage-server local file statistics

Table 258. show gtp storage-server local file statistics Command Output Descriptions

Field	Description
Total CDR written	The total number of GTP CDR files written to the hard disk.
Total File Rotations	The total number of file rotation processes completed.
File Rotation Type	
CDR-Count-limit	The total number of CDR files that have been rotated.
Time-limit	Identifies the time limit for file rotation..
Forced (0 CDRs)	Identifies the total number of zero-cdr files created at the local storage due to enabling of “force-file-rotation” trigger.
Others	Total number of file rotations happened due to triggers not listed in this table when for local CDR files.
File Compression	
Compression Success	The total number of files compressed.
Compression Failures	The number of files that were not able to be compressed.

show gtp storage-server status

Table 259. show gtp storage server status Command Output Descriptions

Field	Description
Configuration	
Execution Mode	Execution mode of the G-CDRs.
File Format	Specifies the file format used for CDRs.
Max GCDRs per file	Maximum number of G-CDRs per file.
Notification Type	Type of notification.
Poll Interval (min)	Poll interval in Minutes.
Resource Monitor	
Outstanding GCDRs File Period (min)	Outstanding G-CDRs file period in minutes.
CPU Usage (%)	CPU usage in percentage.
Available Disk Gss Datafile Path (GB)	Threshold value for available disk size for path or partition on GSS node where CDR files are generated and stored by GSS Filegen application. Example: /sharedgss
Available Disk Gss Install Path (GB)	Threshold value for available disk size for path or partition on GSS node where basic components of GSS like bin directory, config files, postgres bin directory and local log files are present. Example: /gss
Available Disk Gss Database Path (GB)	Threshold value for available disk size for path or partition on GSS node where postgres database is installed. Example: /sharedpostgres
Available Memory (MB)	Available memory at a given time.
Resource Monitor Status	
Outstanding GCDRs File Period (min)	Number of outstanding G-CDR files during a given period of time (in minutes).
State	State of the G-CDR collection.
CPU Usage (%)	CPU usage in percentage.
State	State of the CPU.
Available Disk Gss Datafile Path (GB) State	Measured or current value for disk size for path or partition on GSS node where CDR files are generated and stored by GSS Filegen application. Example: /sharedgss If Measured or current value for disk size (GB) falls below configured limit (Threshold value), then Alarm is generated.

Field	Description
Available Disk Gss Install Path (GB) State	Measured or current value for disk size for path or partition on GSS node where basic components of gss like bin directory, config files and postgres bin directory and local log files are present. Example : /gss If Measured or current value for disk size(GB) falls below configured limit (Threshold value), then Alarm is generated.
Available Disk Gss Database Path (GB) State	Measured or current value for available disk size for path or partition on GSS node where postgres database is installed. Example: /sharedpostgres If Measured or current value for disk size(GB) falls below configured limit (Threshold value), then Alarm is generated.
Available Memory (MB)	Amount of memory available for additional G-CDR files.
State:	Condition of the available memory.
Cluster Status	
Cluster Name	Name of the gss cluster.
Online Cluster Node	Name of cluster node(s) that are online at the status collection time.
Cluster Node List	Name(s) of the node(s) included in the cluster.

show gtp storage-server streaming file statistics

Table 260. show gtp storage-server streaming file statistics Command Output Descriptions

Field	Description
Total CDR written	Total number of streaming CDRs written into the RAM-Disk when gtp storage-server “streaming” mode was enabled.
Total CDR sent to remote	Total number of streaming CDRs sent to CGF from the HDD once the CGF/GTPP is up.
Total Files Failed	During streaming if the CDR file is corrupted, the file will not stream to CGF and renamed to *.fail. This counters indicates the total number of such failed files.
Total File Rotations	Total number of file rotations based on File Size, CDR count, time-limit when “streaming” mode was enabled. The file rotation triggers are configurable in GTPP Group Configuration mode.
File Rotation Type	
File-Size-limit	Total number of file rotations happened due to “File-Size-limit” trigger when “streaming” mode was enabled.
CDR-Count-limit	Total number of file rotations happened due to “CDR-Count-limit” trigger when “streaming” mode was enabled.
Time-limit	Total number of file rotations happened due to “Time-limit” trigger when “streaming” mode was enabled.
Forced (0 CDRs)	Identifies the total number of zero-cdr files created at the local storage due to enabling of “force-file-rotation” trigger.
Others	Total number of file rotations happened due to triggers not listed in this table when “streaming” mode was enabled.

show gtp storage-server streaming file statistics verbose

Table 261.show gtp storage-server streaming file statistics verbose Command Output Descriptions

Field	Description
Accumulated Statistics:	
Total CDR written	Total number of streaming CDRs written into the RAM-Disk when gtp storage-server “streaming” mode was enabled.
Total CDR sent to remote	Total number of streaming CDRs sent to CGF from the HDD once the CGF/GTPP is up.
Total CDR accepted	Total number of CDRs that are acknowledged by CGF (successfully streamed by the ASR 5000).
Total CDR req already fulfilled	Total number of CDR requests that are already acknowledged by CGF. NOTE: When streaming is in progress from a file, the AAA proxy may fail. When the AAA proxy is recovered, requests will <u>not</u> be sent from files that are acknowledged by CGF. Instead, the counter is incremented.
Total Files sent to remote	Total number of CDR files sent to GTPP Storage Server and acknowledged by CGF. NOTE: When streaming is in progress from a file, the AAA proxy may fail. When the AAA proxy is recovered, requests will <u>not</u> be sent from files that are acknowledged by CGF. Instead, the counter is incremented.
Total Files Failed	During streaming if the CDR file is corrupted, the file will not stream to CGF and renamed to *.fail. This counter indicates the total number of such failed files.
Total File Rotations	Total number of file rotations based on File Size, CDR count, time-limit when “streaming” mode was enabled. The file rotation triggers are configurable in GTPP Group Configuration mode.
File Rotation Type	
File-Size-limit	Total number of file rotations happened due to “File-Size-limit” trigger when “streaming” mode was enabled.
CDR-Count-limit	Total number of file rotations happened due to “CDR-Count-limit” trigger when “streaming” mode was enabled.
Time-limit	Total number of file rotations happened due to “Time-limit” trigger when “streaming” mode was enabled.
Forced (0 CDRs)	Identifies the total number of zero-cdr files created at the local storage due to enabling of “force-file-rotation” trigger.
Others	Total number of file rotations happened due to triggers not listed in this table when “streaming” mode was enabled.
CDR distribution in DRT Messages	
0:	Total number of Data Request Transfer (DRT) requests sent with no CDRs.
1:	Total number of Data Request Transfer (DRT) requests sent with one CDR.
2..5:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 2 to 5.

Field	Description
6..10:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 6 to 10.
11..15:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 11 to 15.
16..20:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 16 to 20.
21..40:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 21 to 40.
41..60:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 41 to 60.
61..80:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 61 to 80.
81..100:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 81 to 100.
101..150:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 101 to 150.
151..200:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 151 to 200.
201..254:	Total number of Data Request Transfer (DRT) requests sent where each request contains CDRs from 201 to 254.
255:	Total number of Data Request Transfer (DRT) requests sent where each request contains 255 CDRs.

show gtp storage-server streaming file counters all

Table 262. show gtp storage-server streaming file counters all Command Output Descriptions

Field	Description
GTPP Req pending write	Total number of CDR request queued up and not yet stored in RAM-Disk when “streaming” mode was enabled.
GTPP Req pending response	Total number of GTPP request yet to send acknowledgement to the AAAMgr after storing the CDRs successfully in RAM-Disk when “streaming” mode was enabled.
File related counters	
Current file CDR count	Total number of CDRs stored in RAM-disk file which is not yet synced to the HDD when “streaming” mode was enabled.
Files pending sync	Total number of files waiting for the sync response from HDD when “streaming” mode was enabled.
Current Pending CDRs in HDD	Total number of CDRs written into the hard-disk (Indicates the CDR count of rotated files) when “streaming” mode was enabled.
Current Pending Files in HDD	Total number of files stored in hard-disk when “streaming” mode was enabled.

Chapter 104

show gtpu-service

This chapter includes the `show gtpu-service` command output tables.

show gtpu-service all

Table 263. show gtpu-service all Command Output Descriptions

Field	Description
Service name	The name of the service configured in the named context.
Context	The name of the context where the service is configured.
State	The status of the service, i.e., “Initiated”.
Echo Interval	The duration between the sending of GTP-U echo messages.
Include UDP Port Ext.Hdr	Indicates if an extension header, in the GTP-U packet header, allowing for error indication messages will be added.
Max-retransmissions	The number of user data packet request message retransmissions that can be sent before an error condition is established.
Retransmission Timeout	The number of seconds between the re-sending of GTP-U echo messages
IPSEC Tunnel Idle Timeout	The number of seconds an IPsec tunnel is idle before tunnel deletion is triggered.
Allow Error-Indication	Indicates if the error indication will be allowed or suppressed upon the receipt of a user data packet for a non-existent session.
Address List	Identifies the IP address used to transmit/receive GTP-U packets.
Path Failure Detection on gtp echo msgs	Identifies if the path failure detection is enabled upon reaching the maximum number of echo retransmissions.
Path Failure Clear Trap	Identifies the configuration of the path-failure clear-trap command. Echo indicates that the path-failure trap will be cleared only on receipt of an echo message from the particular peer. Non-echo indicates that the path-failure trap will be cleared on receipt of the first control plane message for that GTPU peer allocation.

Chapter 105

show hardware card

Table 264. show hardware card Command Output Descriptions

Field	Applicable Card(s)	Description
Card Type	All	The type of card installed.
Card Description	All	Displays the description assigned to the card during software configuration.
Part Number	All	The card's part number. Cards of the same type and revision will have the same part number.
Serial Number	All	The card's serial number.
Switch Fabric Modes	SMC, Processing Cards	Which Switch Fabric modes the card can do. Possible values are: • control plane • switch fabric
MAC Addresses	SMC, SPIO, and line cards	The media access control addresses supported by the interfaces on the cards.
Card Programmables	All	This field indicates if the software on any of the programmable components on the card is not at the current revision. • If all software is current, Up To Date is displayed. • If one or more components do not have the most current software, Out of Date is displayed, along with the component(s) requiring the newer code. • If one or more components have experimental or unreleased software, Experimental/Unreleased is displayed.
NPU Microcode	Processing Cards	The version of the software running (currently operational) on the Network Processing Unit (NPU).
Slave SCB	Processing Cards, SPIO, RCC, and line cards	The firmware version of the component that allows non-SMC cards to communicate with the SMC over the system control bus (SCB). on-card : Indicates the version of the firmware that is on the boot flash for the component.
SRM	SMC	The firmware version of the Status, Reset, and Monitoring component.
CIF FPGA	SMC	The firmware version of the Chassis Information (CIF) Field Programmable Gate Array (FPGA). • on-card: Indicates the version of the firmware that is on the boot flash for the component. • running: The firmware version that is currently operational.

■ show gtpu-service all

Field	Applicable Card(s)	Description
PSR	Processing Cards	The firmware version of the Power, Status, and Reset component.
BIOS	Processing Cards, SMC	The version of the Basic Input/Output System (BIOS). on-card indicates the version of the firmware that on the boot flash for the component.
DT FPGA	Processing Cards	The firmware version of the Data Transport (DT) Field Programmable Gate Array (FPGA). • on-card: Indicates the version of the firmware that is on the boot flash for the component. • running: The firmware version that is currently operational.
FPGA	SPIO and line cards	The Field Programmable Gate Arrays that allow the SPIOs and other line cards to communicate with the SMC and Processing Cards respectively. on-card : Indicates the version of the firmware that is on the boot flash for the component.
CPU 0 through 3 Type / Memory	Processing Cards and SMC	The CPU's pass (revision), speed and memory. The SMC only indicates CPU 0 because it has only one CPU. The Processing Cards display CPUs 0 and 1 because each card has two CPUs.
CPU 0 through 3 CFE / Diags	Processing Cards and SMC	The CPU's Common Firmware Environment (CFE) and diagnostic software version. • on-card: Indicates the version of the firmware that is on the boot flash for the component. • running: The firmware version that is currently operational. The SMC only indicates CPU 0 because it has only one CPU. The Processing Cards display CPUs 0 and 1 because each card has two CPUs.
SFP Info	SPIO and Ethernet 1000 line cards and Quad Gig-E line card, 10 Gig Ethernet line card	Indicates information pertaining to the small form-factor pluggable (SFP) modules installed on the card. Among the information provided is the Manufacturer name, ID number, the module part and serial numbers, and the production date.

Chapter 106

show hd-storage-policy

This chapter includes the `show hd-storage-policy` command output tables.

show hd-storage-policy counters all

Table 265. show hd-storage-policy counters all Command Output Descriptions

Field	Description
HD Storage Policy	The name of the HD storage policy configured on the system.
Diameter Counters	
File related counters	
Current ACR file record count	The total number of ACR file records for this policy currently stored on the HDD.
Current ACR file Size	The current ACR file size on the HDD for this policy.
Current ACR Files Synched to HDD	The total number of ACR files rotated and sent to the hard disk drive from the time the system is operational.

show hd-storage-policy statistics all

Table 266. show hd-storage-policy statistics all Command Output Descriptions

Field	Description
HD Storage Policy	The name of the HD storage policy configured on the system.
Diameter Statistics	
Total ACR written	The total number of active charging records written to the HD storage device for this policy.
Total ACR File Rotations	The total number of times files were rotated.
File Rotation Type	
ACR-File-Size-limit	The file size limit, in megabytes. When exceeded, file rotation occurs.
ACR-Record-Count-limit	The record count limit. When exceeded, file rotation occurs.
ACR-Time-limit	The time limit, in seconds. When exceeded, file rotation occurs.
ACR-Manual-File-Rotation	The total number of times file rotation was initiated manually.
ACR-Others	The total number of ACR rotations for reasons other than above. If incremented, this counter generally indicates an error condition.

Chapter 107

show hd raid verbose

Table 267. show hd raid verbose Command Output Descriptions

Field	Description
HD RAID	
State	The following conditions apply to the RAID function: Available (clean): At least one disk is ready Available (active): Disk resynchronizing Not Available
Degraded	The following conditions apply: No: Both disks are ready Yes: One disk is ready
UUID	Universal Identification number
Size	Drive size in bytes
Action	The following conditions apply: Idle: Neither resynchronizing nor rebuilding RAID Recovering (dd% done) Rebuilding Resynching (dd% done) Checking (dd% done) Repairing (dd% done)
Disk	Disk name
	The following conditions apply to the disk: State: In-sync component Spare component: Rebuilding RAID Valid image of UUID: Different image Not used: Set by Admin Faulty component Invalid partition or image Unknown partition or image Created Date image created Updated Date image updated Events Interval event count Model Disk model number Serial Number Disk serial number Location Disk location Size Disk size in bytes Partitions Total number of partitions Partition Partition size in bytes and sectors for each partition

Chapter 108

show hnbgw

This chapter includes the **show hnbgw** command output tables.

show hnbgw access-control-db

Table 268. show hnbgw access-control-db Command Output Descriptions

Field	Description
Total Number of IMSIs	The total number of IMSIs available in White List of Access Control database on HNB-GW service instance.
Number of Registered IMSIs	The total number of IMSIs from Access Control database are registered on HNB-GW service instance.
Number of IMSIs undergoing Relocation	The total number of IMSIs from Access Control database are under the process of relocation on HNB-GW service instance.
Number of IMSIs marked for Purging	The total number of IMSIs from Access Control database are marked for purging from database on HNB-GW service instance.

show hnbgw access-control-db imsi

Table 269. show hnbgw access-control-db imsi Command Output Descriptions

Field	Description
IMSI	Indicates the IMSI for which statistics queried in White List of Access Control database on HNB-GW service instance.
Owner Location Area Code (LAC)	Indicates the Location Area Code (LAC) of the owner of specific IMSI registered in Access Control database on HNB-GW service instance.
Undergoing Relocation	Indicates whether queried IMSI is going through relocation procedure or not.
HNBs having IMSI in whitelist	Indicates the total number of HNBs where specific IMSI is in White List in Access Control database on HNB-GW service instance.
Core Network Id	Indicates the core Network ID of specific IMSI.
IMSI Purge Timer	This group indicates status of IMSI purge timer for Access Control database.
State	Indicates the status of Access Control database purge process.
Start Time	Indicates the configured time for start of purge process on Access Control database for specific IMSI.
End Time	Indicates the configured time for completion of purge process on Access Control database for specific IMSI.

show hnbgw counters

Table 270. show hnbgw counters Command Output Descriptions

Field	Description
Number of registered HNBs	The total number of HNB devices (Open and Closed) registered with this HNB-GW service.
Number of registered UEs	The total number of User Equipment devices registered with this HNB-GW service through open and closed HNBs.
Number of UEs with IuPS connection	The total number of User Equipment devices that have established a connection with the Packet Switched network.
Number of UEs with IuCS connection	The total number of User Equipment devices that have established a connection with the Circuit Switched network.
Number of UEs with IuPS and IuCS connection	The total number of User Equipment devices that have established connections to both the Packet Switched and Circuit Switched networks.
Number of Idle UEs	The total number of User Equipment devices that have no active connections to either the Packet Switched or Circuit Switched networks.

show hnbgw counters hnbgw-service

Table 271. show hnbgw counters hnbgw-service Command Output Descriptions

Field	Description
HNBGW Service	The name that identifies this HNB-GW service.
Number of registered HNBs	The total number of HNB devices (Open and Closed) registered with this HNB-GW service.
Number of registered UEs	The total number of User Equipment devices registered with this HNB-GW service through open and closed HNBs.
Number of UEs with IuPS connection	The total number of User Equipment devices that have a Packet Switched network connection to a SGSN via this HNB-GW service.
Number of UEs with IuCS connection	The total number of User Equipment devices that have established a Circuit Switched network connection to a MSC via this HNB-GW service.
Number of UEs with IuPS and IuCS connection	The total number of User Equipment devices that have established Packet Switched (SGSN) and Circuit Switched (MSC) network connections via this HNB-GW service.
Number of Idle UEs	The total number of User Equipment devices that do not have an active connection to a Packet Switched (SGSN) or Circuit Switched (MSC) network.

show hnbgw counters hnbid

Table 272. show hnbgw counters hnbid Command Output Descriptions

Field	Description
HNB Id	The HNB device ID sent to the HNB-GW during registration.
Number of registered UEs	The number of User Equipment devices that have registered with this HNB.
Number of UEs with IuPS connection	The number of User Equipment devices that have established a connection to a SGSN via the Packet Switched network.
Number of UEs with IuCS connection	The number of User Equipment devices that have established a connection to a MSC via the Circuit Switched network.
Number of UEs with IuPS and IuCS connection	The number of User Equipment devices that have established connections to an MSC via the Circuit Switched interface and an SGSN via the Packet Switched network.
Number of Idle UEs	The number of User Equipment devices that do not have an active connection to Packet Switched (SGSN) or Circuit Switched (MSC) networks.

show hnbgw disconnect-reasons

Table 273. show hnbgw disconnect-reasons Command Output Descriptions

Field	Description
HNB	This group displays the detailed disconnect reasons at the HNB-GW for particular HNB.
Duplicate HNB Registration	Total number of HNBs disconnected on HNB-GW as duplicate registration was tried for same HNB.
Admin Disconnect	Total number of HNBs disconnected on a HNB-GW due to administrative decision like removal of service, subscriber or result of clearing subscriber session through Exec mode.
Miscellaneous	Total number of HNBs disconnected on a HNB-GW due to miscellaneous or unknown reasons, the reason not mentioned in this table.
HNB Terminated SCTP Association	Total number of HNBs disconnected on a HNB-GW as HNB terminated the SCTP association with HNB-GW.
SCTP Idle Timeout	Total number of HNBs disconnected on a HNB-GW as HNB was idle for long time and timer for SCTP idle duration triggered the termination after timeout duration expired.
Access Accept Message had issue	Total number of HNBs disconnected on a HNB-GW due to some error in Access Accept message format or missing value or parameters.
Access Reject	Total number of HNBs disconnected on a HNB-GW as HNB access was rejected by HNB-GW.
Configuration Issue	Total number of HNBs disconnected on a HNB-GW due to some error or misconfiguration found in configuration on HNB or on HNB-GW for particular HNB.
Deregister from HNB	Total number of HNBs disconnected on a HNB-GW as HNB sent de-registration request to HNB-GW.
Deregister Radius DM	Total number of HNBs disconnected on a HNB-GW as AAA server sent the Disconnect message to deregister the HNB with HNB-GW.
Cleared due to SCTP timeouts	Total number of HNBs disconnected on a HNB-GW as timer for SCTP idle duration triggered the clearing of session after timeout duration expired.
UE	This group displays the detailed disconnect reasons at the HNB-GW for particular UE.
Duplicate UE Registration	Total number of UEs disconnected on HNB-GW as duplicate registration was tried for same UE.
UE Relocated to another HNB	Total number of UEs disconnected on a HNB-GW as same UE relocated to another HNB.
UE Register Reject - Miscellaneous	Total number of UEs registration rejected on a HNB-GW due to miscellaneous or unknown reasons, the reason not mentioned in this table.
UE Deregister from HNB	Total number of UEs disconnected on a HNB-GW as UE deregisters it self from associated HNB.

Field	Description
RUA Connect after COA	Total number of UEs disconnected on a HNB-GW as RANAP User Adaptation connected after Change of Authorization from AAA server.
HNB Removed	Total number of UEs disconnected on a HNB-GW as particular associated HNB is removed from HNB-GW.
UE Idle time out	Total number of UEs disconnected on a HNB-GW as UE was idle for long time and timer for idle duration triggered the termination after timeout duration expired.
Auth Failure - UE Register Rejected	Total number of UEs disconnected on a HNB-GW as AAA server has sent the Authentication Failure and UE registration is rejected.
Miscellaneous	Total number of UEs disconnected on a HNB-GW due to miscellaneous or unknown reasons, the reason not mentioned in this table.
Stale UE Session cleared on Relocation arrival	Total number of stale UE sessions cleared on a HNB-GW due to relocation arrival with particular HNB.
IuCS	This group displays the detailed disconnect reasons at the HNB-GW for particular IuCS connection.
UE Deregistered	Total number of IuCS association disconnected on HNB-GW as de-registration procedure was initiated for UE.
Miscellaneous	Total number of IuCS association disconnected on a HNB-GW and CN due to miscellaneous or unknown reasons, the reason not mentioned in this table.
Relocation Failure from HNB	Total number of IuCS association disconnected due to relocation failure message received from HNB.
Connect over Connect	Total number of IuCS association disconnected on a HNB-GW as same connection tried over the same association.
RUA Disconnect	Total number of IuCS association disconnected on a HNB-GW due to RANAP User Adaptation disconnected.
SCCP Released	Total number of IuCS association disconnected on a HNB-GW as SCCP association is release between HNB-GW and associated CN.
HNB Reset	Total number of IuCS association disconnected on a HNB-GW due to trigger of RESET procedure from HNB.
Admin Disconnect	Total number of IuCS disconnected on a HNB-GW due to administrative decision like removal of service, subscriber or result of clearing subscriber session through Exec mode.
Iar Expiry	
Common-ID IMSI check failed	Total number of IuCS disconnected on a HNB-GW due to failure in IMSI and common id check of UE.
MSC Reset/Unreachable	Total number of IuCS association disconnected on a HNB-GW due to trigger of RESET procedure from MSC or MSC is not reachable in CN.

Field	Description
IuPS	This group displays the detailed disconnect reasons at the HNB-GW for particular IuPS connection.
UE Deregistered	Total number of IuPS association disconnected on HNB-GW as de-registration procedure was initiated for UE.
Miscellaneous	Total number of IuPS association disconnected on a HNB-GW and CN due to miscellaneous or unknown reasons, the reason not mentioned in this table.
Relocation Failure from HNB	Total number of IuPS association disconnected due to relocation failure message received from HNB.
Connect over Connect	Total number of IuPS association disconnected on a HNB-GW as same connection tried over the same association.
RUA Disconnect	Total number of IuPS association disconnected on a HNB-GW due to RANAP User Adaptation disconnected.
SCCP Released	Total number of IuPS association disconnected on a HNB-GW as SCCP association is release between HNB-GW and associated CN.
HNB Reset	Total number of IuPS association disconnected on a HNB-GW due to trigger of RESET procedure from HNB.
Admin Disconnect	Total number of IuPS disconnected on a HNB-GW due to administrative decision like removal of service or any entity, subscriber or result of clearing subscriber session through Exec mode.
Iar Expiry	
Common-ID IMSI check failed	Total number of IuPS disconnected on a HNB-GW due to failure in IMSI and common id check of UE.
SGSN Reset/Unreachable	Total number of IuPS association disconnected on a HNB-GW due to trigger of RESET procedure from SGSN or SGSN is not reachable in CN.
GTPU Path Failure towards HNB	Total number of IuPS association disconnected on a HNB-GW due to failure of GTP-U path towards HNB.
CS-RAB	This group displays the detailed disconnect reasons at the HNB-GW for particular RAB in CS domain.
Issue in RAB Asst Req Message	Total number of RABs disconnected on HNB-GW due to issue in RAB Assignment Request message from MSC to HNB-GW.
Issue in Reloc Req Message	Total number of RABs disconnected on HNB-GW due to issue in RAB Relocation Request message.
Config Issue	Total number of RABs disconnected on a HNB-GW due to some error or misconfiguration found in configuration in CS domain or on HNB-GW for particular CN.
AAL2 Channel Establish failure	Total number of RABs disconnected on a HNB-GW due to failure in AAL2 channel establishment between MSC and HNB-GW in particular CS domain.

Field	Description
Issue in RAB Assgt Resp Message	Total number of RABs disconnected on a HNB-GW due to issues in RAB Assignment Response message from HNB-GW to MSC in particular CS domain.
HNB Failed RAB in RAB Assgt Resp Message	Total number of RABs disconnected on a HNB-GW as RAB establishment failed between HNB and HNB-GW and response received in RAB Assignment Response message from HNB-GW to MSC in particular CS domain.
HNB Failed RAB in Reloc Request Ack Message	Total number of RABs disconnected on a HNB-GW as RAB Relocation failed between HNB and HNB-GW and response received in RAB Relocation Request Ack message from HNB-GW to MSC in particular CS domain.
Issue in Reloc Req Ack Message	Total number of RABs disconnected on a HNB-GW due to issues in RAB Relocation Request Ack message from HNB-GW to MSC in particular CS domain.
CN Initiated RAB Release	Total number of RABs disconnected on a HNB-GW as CN node (MSC) initiated the RAB release procedure in particular CS domain.
RAB Assignment Timer Expiry	Total number of RABs disconnected on a HNB-GW due to expiry of RAB Assignment timer duration.
RAB Release Timer Expiry	Total number of RABs disconnected on a HNB-GW due to expiry of RAB Release Timer duration.
AAL2 Connection Released	Total number of RABs disconnected on a HNB-GW due to release of AAL2 connections.
IU went down	Total number of RABs disconnected on a HNB-GW due failure of IuCS interface.
Admin Disconnect	Total number of RABs disconnected on a HNB-GW due to administrative decision like removal of service or any entity, subscriber or result of clearing subscriber session through Exec mode.
Dropped - RAB Assgt Req Decoding failed	Total number of RABs disconnected on a HNB-GW due to failure in decoding of RAB Assignment Request message from HNB-GW to MSC in particular CS domain.
Miscellaneous	Total number of RABs disconnected on a HNB-GW and CN due to miscellaneous or unknown reasons, the reason not mentioned in this table.
PS-RAB	This group displays the detailed disconnect reasons at the HNB-GW for particular RAB in PS domain.
Issue in RAB Asst Req Message	Total number of RABs disconnected on HNB-GW due to issue in RAB Assignment Request message from SGSN to HNB-GW.
Issue in Reloc Req Message	Total number of RABs disconnected on HNB-GW due to issue in RAB Relocation Request message.
Config Issue	Total number of RABs disconnected on a HNB-GW due to some error or misconfiguration found in configuration in PS domain or on HNB-GW for particular CN.
Issue in RAB Assgt Resp Message	Total number of RABs disconnected on a HNB-GW due to issues in RAB Assignment Response message from HNB-GW to SGSN in particular PS domain.
HNB Failed the RAB in RAB Assgt Resp Message	Total number of RABs disconnected on a HNB-GW as RAB establishment failed between HNB and HNB-GW and response received in RAB Assignment Response message from HNB-GW to SGSN in particular PS domain.

Field	Description
HNB Failed the RAB in Reloc Request Ack Message	Total number of RABs disconnected on a HNB-GW as RAB Relocation failed between HNB and HNB-GW and response received in RAB Relocation Request Ack message from HNB-GW to SGSN in particular PS domain.
Issue in Reloc Req Ack Message	Total number of RABs disconnected on a HNB-GW due to issues in RAB Relocation Request Ack message from HNB-GW to SGSN in particular PS domain.
CN Initiated RAB Release	Total number of RABs disconnected on a HNB-GW as CN node (SGSN) initiated the RAB release procedure in particular PS domain.
RAB Assignment Timer Expiry	Total number of RABs disconnected on a HNB-GW due to expiry of RAB Assignment timer duration.
IU went down	Total number of RABs disconnected on a HNB-GW due to failure of IuPS interface.
Admin Disconnect	Total number of RABs disconnected on a HNB-GW due to administrative decision like removal of service or any entity, subscriber or result of clearing subscriber session through Exec mode.
Dropped - RAB Assgt Req Decoding failed	Total number of RABs disconnected on a HNB-GW due to failure in decoding of RAB Assignment Request message from HNB-GW to SGSN in particular PS domain.
Miscellaneous	Total number of RABs disconnected on a HNB-GW and CN due to miscellaneous or unknown reasons, the reason not mentioned in this table.
GTPU CN Error Indication	Total number of RABs disconnected on a HNB-GW and CN due to CN Error Indication in GTP-U message.
GTPU CN Path Failure	Total number of RABs disconnected on a HNB-GW and CN due to CN Path Failure in GTP-U message.
GTPU HNB Error Indication	Total number of RABs disconnected on a HNB-GW and CN due to HNB Error Indication GTP-U message.

show hnbgw-service

Table 274. show hnbgw-service all Command Output Descriptions

Field	Description
Service name	The name used to identify the HNB-GW service to the system.
Context name	The name of the system context in which the HNB-GW service is defined.
SCTP IP Address	The IP address used to transmit SCTP messages from HNBs to the HNB-GW.
SCTP Port	The HNB-GW uses this port to listen for SCTP messages from HNBs.
GTP-U Service	The defined GTP-U service name(s) associated with the HNB-GW service in a Packet Switched network instance. The GTP-U service(s) are used for GTP-U tunneling towards the HNB-GW access network.
RTP MUX	Indicates if RTP multiplexing is enabled or disabled. If enabled, multiple subscriber voice packets can be multiplexed and sent as one RTP packet towards the HNB-GW. This is explicitly negotiated between the HNB and the HNB-GW during HNB Registration.
RTP Pool	This is the IP pool used to allocate IP address to subscriber in the RAB request by the HNB-GW as the transport layer endpoint. The HNB will send RTP data (packetized voice) to IP address allocated from this pool.
RTCP report interval	Indicates if the RTCP (Real time Transport Control Protocol) report interval is enabled or not. RTCP enables the receiver to detect if there is any packet loss and to compensate for any delay jitter. RTP and RTCP protocols work independently of the underlying Transport layer and Network layer protocols.
HNBGW Initiated Ranap Reset	Indicates if the HNB-GW Initiated RANAP Reset function is enabled or disabled.
Ranap Reset Ack Timer	The timer value, in seconds, that defines how long the HNB-GW waits for a RESET ACK message from the SGSN or MSC after transmitting a RESET message. This setting is used only if the HNB-GW Initiated RANAP Reset function is enabled.
Ranap Reset Maximum Retransmissions	Sets the maximum number of retries allowed for the HNB-GW to transmit a RANAP RESET message to the SGSN or MSC if the RESET ACK timer expires. This setting is used only if the HNB-GW Initiated RANAP Reset function is enabled.
Ranap Reset Guard Timer	The timer that the HNB-GW starts after receiving a RESET message from the core network. While this timer is running, the HNB-GW discards any new RESET messages that it receives.
SCTP HEARTBEAT Timeout	The timeout duration set in milliseconds for SCTP heartbeat transmission between HNB and HNB-GW. Default value is 3000 milliseconds. After this duration retransmission will start.
SCTP RTO-MIN Timeout	The minimum retransmission timeout duration set in milliseconds for SCTP heartbeat retransmission between HNB and HNB-GW. Default value is 1000 milliseconds.
SCTP RTO-MAX Timeout	The maximum retransmission timeout duration set in milliseconds for SCTP heartbeat retransmission between HNB and HNB-GW. Default value is 10000 milliseconds.
SCTP RTO-INITIAL Timeout	The initial retransmission timeout duration set in milliseconds for SCTP heartbeat retransmission between HNB and HNB-GW. Default value is 10000 milliseconds.

Field	Description
SCTP ALPHA-RTO	The retransmission timeout attempt set for initial phase for SCTP heartbeat retransmission between HNB and HNB-GW. Default value is 5 attempts.
SCTP BETA-RTO	The retransmission timeout attempt set for second phase for SCTP heartbeat retransmission between HNB and HNB-GW. Default value is 10 attempts.
SCTP CHECKSUM-TYPE	Indicates the checksum type set for SCTP communication between HNB and HNB-GW. Default checksum type is CRC32 .
SCTP COOKIE-LIFE	Indicates the life duration set for SCTP Cookies for SCTP communication between HNB and HNB-GW. Default value is 60000 msec.
SCTP MAX-RETX-INIT	Indicates the maximum number of SCTP INIT messages retransmitted for SCTP communication between HNB and HNB-GW.
SCTP MAX-RETX-PATH	Indicates the maximum number of SCTP PATH messages retransmitted for SCTP communication between HNB and HNB-GW.
SCTP MAX-RETX-ASSOC	Indicates the maximum number of SCTP ASSOC messages retransmitted for SCTP communication between HNB and HNB-GW.
SCTP MTU-SIZE-MIN	Indicates the minimum transmission unit size set for MTU for SCTP communication between HNB and HNB-GW. Default value is 508 bytes.
SCTP MTU-SIZE-MAX	Indicates the minimum transmission unit size set for MTU for SCTP communication between HNB and HNB-GW. Default value is 1500 bytes.
SCTP MTU-SIZE-INITIAL	Indicates the initial transmission unit size set for MTU for SCTP communication between HNB and HNB-GW. Default value is 508 bytes.
SCTP SACK-FREQUENCY	Indicates the frequency of set for Selective Acknowledgement (SACK) messages for SCTP communication between HNB and HNB-GW.
SCTP SACK-PERIOD	Indicates the Selective Acknowledgement (SACK) period between two SACK messages set for SCTP communication between HNB and HNB-GW.
SCTP MAX-IN-STRMS	Indicates the maximum number of incoming SCTP streams allowed on HNB-GW for SCTP communication between HNB and HNB-GW.
SCTP MAX-OUT-STRMS	Indicates the maximum number of outgoing SCTP streams allowed from HNB-GW for SCTP communication between HNB and HNB-GW.
SCTP Connection Timeout	Indicates the timeout duration set for SCTP communication between HNB and HNB-GW after which reconnection procedure will start. Default value is 10 secs.
UE Registration Timeout	Indicates the timeout duration set for UE registration between UE and HNB-GW after which re-registration procedure will start. Default value is 120 secs.
NNSF TIMER for Paging in LuFlex	Indicates the duration set in seconds for NAS Node Selection Function (NNSF) timer (T-NNSF) which is used by the HNB-GW to store the IMSI and the relevant <i>CN Global-ID</i> in the short term after Paging. This timer is used for LuFlex feature support. Default timer value is 30 seconds.
IMSI Purge Timeout	Indicates the timeout duration set in minutes for to store the IMSI and the relevant information after which IMSI information will be purged from HNB-GW db. This timer is used for LuFlex feature support. Default timeout value is 1440 minutes.

Field	Description
Incoming handoff for CS domain	Indicates the status of incoming handover permission/restriction set in HNB-GW service instance for incoming handover of an MS via SRNS Relocation procedure for CS core network domain. Possible values are: • Disabled • Enabled
Incoming handoff for PS domain	Indicates the status of incoming handover permission/restriction set in HNB-GW service instance for incoming handover of an MS via SRNS Relocation procedure for PS core network domain. Possible values are: • Disabled • Enabled
Available Radio Network PLMN	The Public Land Mobile Network ID configured for this HNB-GW service. It consists of the MCC and MNC (see below).
MCC	The Mobile Country Code defined for use with this HNB-GW service. It consists of the first 3 digits of the Available Radio Network PLMN ID.
MNC	The Mobile Network Code defined for use with this HNB-GW service. It consists of the last 3 digits of the Available Radio Network PLMN ID.
RNC-Id	The Radio Network Controller ID provided to HNBs for use by the core network for this HNB-GW service. It is configured under the PLMN-ID
Lac	The defined Location Area Identifier provided to HNBs during registration with this HNB-GW service. The LAC signifies which location area this HNB-GW service belongs to, and is configured under the PLMN-ID.
Rac	The Routing Area Identifier provided to HNBs during registration with this HNB-GW service. The RAC signifies the routing area that this HNB-GW service belongs to and is configured under the PLMN-ID
PS Network Name	The PS-network to be used for selecting the packet-switched core-network (i.e., SGSN) and its point-code.
CS Network Name	The CS-network to be used for selecting circuit-switched core-network (i.e., MSC) and its point-code.
Service Status	The current operating status of this HNB-GW service. If the status does not read 'enabled' HNB-GW functionality is not available.
Security GW service Address	The IP address of the HNB-Security Gateway associated with this HNB-GW service. Security Gateway configurations are used when the IPsec GW is co-located with the HNB-GW service on the chassis. If the services are co-located, the SeGW IP address will be used as the IPsec tunnel endpoint by HNBs.
Context name	Specifies the context name in which Security Gateway service is configured.
Crypto-template	Specifies the Crypto-Map template being used by the HNB-GW service for secure IPsec IKEv2 tunneling for the configured Iuh (HNB to HNB-GW) interface. The Crypto-Map template is used only if the HNB-GW and SeGW are co-located on the chassis.
Service in IPsec	Specifies whether specific HNB-GW service is started in secure IPsec IKEv2 tunneling for the configured Iuh (HNB to HNB-GW) interface.

Field	Description
Newcall Policy	Indicates the policy for action on new calls coming on this HNB-GW service instance. Possible actions are: • Accept • Reject
IP QoS DSCP marking	This group indicates the DSCP marking used for egress traffic for various protocols used on IuH and Iu interface in a HNB-GW service instance.
Traffic egress on IuH	Indicates the DSCP marking used for egress traffic for various protocols used on IuH interface in a HNB-GW service instance.
Traffic egress on Iu	Indicates the DSCP marking used for egress traffic towards CN for various protocols used on Iu-CS/Iu-PS interface in a HNB-GW service instance.
Incoming handoff for CS domain	Indicates the status of incoming handover permission/restriction set in HNB-GW service instance for incoming handover of an MS via SRNS Relocation procedure for CS core network domain. Possible values are: • Disabled • Enabled
Incoming handoff for PS domain	Indicates the status of incoming handover permission/restriction set in HNB-GW service instance for incoming handover of an MS via SRNS Relocation procedure for PS core network domain. Possible values are: • Disabled • Enabled

show hnbgw sessions all

Table 275.show hnbgw sessions all Command Output Descriptions

Field	Description
vvvv	Displays service and session state information. This column displays a code consisting of six characters. From left-to-right, the first character represents the Access Technology that the subscriber is using. The possible access technologies are: • F: FEMTO UTRAN • .: Other/Unknown From left-to-right, the second character represents the Session Type. The possible HNB Session types are: • H: HNB • U: UE From left-to-right, the third character represents the HNB State. The possible HNB states are: • R: Registered • D: Deregistered From left-to-right, the fourth character represents the session Network Type. The possible network types are: • I: IP • S: IPSEC • u: Unknown
HNBD	The HNB identification (HNBD) number used for this session.
USERNAME	The subscriber’s user name.
IP	The IP address assigned to the subscriber.
TIME-IDLE	The amount of time that the subscriber session has been idle either in an active or dormant state.
Total subscribers matching specified criteria	The total number of subscribers using HNB sessions.

show hnbgw sessions full

Table 276. show hnbgw sessions full Command Output Descriptions

Field	Description
	This is the first row which indicates the name of the HNB(s) registered for this HNB-GW session.
Card/Cpu	Indicates the card and CPU ID used for this session.
Sessmgr Instance	The session manager instances for this HNB-GW session used.
Access Tech	Indicates the accessing technology. Possible access technologies are: • F: FEMTO UTRAN • .: Other/Unknown
Network Type	Indicates the network service used for the subscriber session. The possible network types are: • I: IP • S: IPSEC • u: Unknown
Status	Indicates the session status. Possible HNB status are: • Online/Active • Offline/Inactive
Access Type	Indicates the session type for this subscriber. The possible access types are: • hnbgw • Unknown
HNB Id	The HNB identification (HNBID) number used for this session in Femto UTRAN network.
state	Indicates the state of the HNBs. Possible HNB states are: • Registered • Deregistered
HNB Local Id	The HNB identification (HNBID) number used locally for this session on HNB-GW.
HNB IP address	Indicates the primary IP address of the HNB in the session. In HNB-GW session this is the primary IP address of Femto CPE.
idle time	The time period that the subscriber session has been idle, either in an active or dormant state.
source context	The name of a configured source context from which the subscriber initiates a session.
callid	Indicates the identity number of call used by this instance of HNB-GW service.
PLMN-ID	The Public Land Mobile Network ID configured for this HNB-GW service. It consists of the MCC and MNC.

Field	Description
LAC	The defined Location Area Identifier provided to HNBs during registration with this HNB-GW service. The LAC signifies which location area this HNB-GW service belongs to, and is configured under the PLMN-ID.
RAC	The Routing Area Identifier provided to HNBs during registration with this HNB-GW service. The RAC signifies the routing area that this HNB-GW service belongs to and is configured under the PLMN-ID
RNC-ID	Indicates the Radio Network Controller ID provided to HNBs for use by the core network for this HNB-GW service. It is configured under the PLMN-ID
Cell ID	The cell identifier provided to HNBs during registration with this HNB-GW service. The cell id signifies the geographical location of HNB-GW session user belongs to.
Service Area Code	This identify a SA (Service Area) within a LA (Location Area) used during this HNB-GW session.
Access Mode	Indicates the access mode used by HNBs for this HNB-GW session. Possible access modes are: • Closed: Indicates that HNB is connected to HNB-GW using Closed Access mode in this session. • Hybrid: Indicates that HNB is connected to HNB-GW using Hybrid Access mode in this session. • Open: Indicates that HNB is connected to HNB-GW using Open Access mode in this session. This counter is applicable for HNB access mode.
IMSI White List	This group displays the White List IMSI database on HNB-GW.
IMSI#	Indicates the IMSI number entered in White List and have clear access to HNB-GW.
Registered IMSI List	This group displays the list of IMSIs registered on HNB-GW. This group is not supported in StarOs 14.0 and onward.
IMSI #	Indicates the IMSI number which is currently registered with HNB-GW service session instance.
Context Id	Indicates the identity number of the context used by specific IMSI.
Registration	Indicates the status of registration of IMSI on HNB-GW.
IuPS connection	Indicates the availability of Iu-PS connection for specific registered IMSI on HNB-GW.
Sessmgr Instance	Indicates the SessManager instance used by specific IMSI for Iu-PS or Iu-CS connection.
callid	Indicates the identity number of call used by specific IMSI for Iu-PS or Iu-CS connection on this instance of SessManager.
IuCS connection	Indicates the availability of Iu-CS connection for specific registered IMSI on HNB-GW.
IuPS connection	Indicates the availability of Iu-PS connection for specific registered IMSI on HNB-GW.

Chapter 109

show hss-peer-service

This chapter includes the `show hss-peer-service` command output tables.

show hss-peer-service name <name>

Table 277. show hss-peer-service name <name> Command Output Descriptions

Field	Description
Service name	The name of the HSS peer service configured and running on the system.
Context	The name of the VPN context in which HSS peer service configured and running on the system.
Status	Indicates whether the HSS peer service is started or not.
Diameter hss-endpoint	The Diameter endpoint name configured in the HSS peer service configuration mode for the S6a HSS interface.
Diameter eir-endpoint	The Diameter endpoint name configured in the HSS peer service configuration mode for the S13 EIR interface.
Diameter hss-dictionary	The name of Diameter dictionary configured for messaging which is to be used for HSS peer service sessions.
Request timeout	The timeout duration in seconds set for heartbeat checking of Diameter requests with the HSS server.
Request Auth-vectors	The number of authentication vectors the MME requests in an Authentication-Information-Request (AIR) message to the HSS for each UE requiring authentication.
Failure-Handling	This group shows the configuration/settings of failure handling actions on various type of Diameter messages for different type of failure.
Message Type	The type of Diameter messages configured for failure handling on specific type of failure or error. The following types of Diameter messages can be configured for failure handling: • Authentication-Information-Request • Check-Identity-Request • Notify-Request • Purge-UE-Request • Update-Location-Request
Failure Type	The type of message failures to trigger the failure handling actions on specific Diameter messages. The following types of failure can be handled for different types of diameter messages: • Diameter Result Code (3000 to 9999) single or a range of code. • Request Timeout
Action	The type of action to be taken of a type of failure for specific type of Diameter messages. The following types of action can be configured for different types of diameter message failures: • Continue • Retry-and-terminate • Terminate

show hss-peer-service session full

Table 278. show hss-peer-service session full Command Output Descriptions

Field	Description
HSS	
Peer	The HSS peer name.
Mode	The mode of the session.
Callid	The EPS subscriber's call identity in 8 digit hex number of the connected call to an HSS peer service session.
NAI	The network access identifier (NAI) of MME-HSS session on the HSS peer service.
MDN	The mobile directory number (MDN) of the MME-HSS session on the HSS peer service.
Service Name	The name of HSS peer service for which statistics are displayed.
State	The status of MME-HSS session on the HSS peer service.
Pending Requests	The status of pending request between the MME and the HSS over the S6a interface during this MME-HSS session on the HSS peer service.
API Requests	
Open	The number of api sessions opened.
Close	The number of api sessions closed.
Update Locations	The number of ULR messages initiated by the MME or SGSN application.
Purge UE	The number of Purge Request messages initiated by the MME or SGSN application.
Authenticate	The number of AIR messages initiated by the MME or SGSN application.
Notify	The number of Notify Request messages initiated by the MME or SGSN application.
Identity Check	The number of MICR messages initiated by the MME or SGSN application.
Recoveries	The number of api session recoveries initiated.
Micro Checkpoint	Not used.
Full Checkpoint	Note used.
User Data Query	The number of user data requests sent by the MME or SGSN application.
API Successes	
Open	The number of api sessions opened successfully.
Close	The number of api sessions closed successfully.

Field	Description
Update Locations	The number of ULR messages successfully sent by the MME or SGSN application.
Purge UE	The number of Purge Request messages successfully sent by the MME or SGSN application.
Authenticate	The number of AIR messages successfully sent by the MME or SGSN application.
Notify	The number of Notify Request messages successfully sent by the MME or SGSN application.
Identity Check	The number of MICR messages successfully sent by the MME or SGSN application.
Recoveries	The number of api sessions recovered successfully.
Micro Checkpoint	Not used.
Full Checkpoint	Not used.
User Data Query	Not used.
API Errors	
Open	The number of api sessions which encountered an error when opened.
Close	The number of api sessions which encountered an error when closed.
Update Locations	The number of ULR messages that failed to be sent by the MME or SGSN application.
Purge UE	The number of Purge Request messages that failed to be sent by the MME or SGSN application.
Authenticate	The number of AIR messages that failed to be sent by the MME or SGSN application.
Notify	The number of Notify Request messages that failed to be sent by the MME or SGSN application.
Identity Check	The number of MICR messages that failed to be sent by the MME or SGSN application.
Recoveries	The number of api sessions that failed recovering.
Micro Checkpoint	Not used.
Full Checkpoint	Not used.
User Data Query	The number of user data request that couldn't be processed.
Server Requests	
Update Locations	The number of ULR messages created at the session level.
Purge UE	The number of Purge Request messages created at the session level.
Authenticate	The number of AIR messages created at the session level.
Notify	The number of Notify Request messages created at the session level.
Identity Check	The number of MICR messages created at the session level.
User Data Req	Not used.
Server Successes	

Field	Description
Update Locations	The number of ULR messages successfully sent.
Purge UE	The number of Purge Request messages successfully sent.
Authenticate	The number of AIR messages successfully sent.
Notify	The number of Notify Request messages successfully sent.
Identity Check	The number of MICR messages successfully sent.
User Data Req	Not used.
Server Errors	
Update Locations	The number of ULR messages which could not be sent. The peer is unavailable, down, or the session could not be opened.
Purge UE	The number of Purge Request messages which could not be sent. The peer is unavailable, down, or the session could not be opened.
Authenticate	The number of AIR messages which could not be sent. The peer is unavailable, down, or the session could not be opened.
Notify	The number of Notify Request messages which could not be sent. The peer is unavailable, down, or the session could not be opened.
Identity Check	The number of MICR messages which could not be sent. The peer is unavailable, down, or the session could not be opened.
User Data Req	Not used.

show hss-peer-service statistics all

Table 279. show hss-peer-service statistics all Command Output Descriptions

Field	Description
HSS Statistics for all services	
Session Stats	
Total Current Sessions	The total number of sessions currently accessing the HSS peer service.
Session Failovers	The total number of session failovers occurring on the SS peer service.
Total Starts	The total number of sessions started on the HSS peer service.
Total Session Updates	The total number of sessions updated on the HSS peer service.
Total Terminated	The total number of sessions that were terminated on the HSS peer service.
Message Stats	
UL Request	The total number of Update Location Request messages sent by the HSS peer service to the HSS.
UL Answer	The total number of Update Location Answer messages received by the HSS peer service from the HSS.
ULR Retries	The total number of Update Location Request Retry messages sent by the HSS peer service to the HSS.
ULA Timeouts	The total number of Update Location Answer Timeout messages received by the HSS peer service from the HSS.
ULA Dropped	The total number of Update Location Answer Dropped messages received by the HSS peer service from the HSS.
PU Request	The total number of Purge UE Request messages sent by the HSS peer service to the HSS.
PU Answer	The total number of Purge UE Answer messages received by the HSS peer service from the HSS.
PUR Retries	The total number of Purge UE Request Retry messages sent by the HSS peer service to the HSS.
PUA Timeouts	The total number of Purge UE Answer Timeout messages received by the HSS peer service from the HSS.
PUA Dropped	The total number of Purge UE Answer Dropped messages received by the HSS peer service from the HSS.
AI Request	The total number of Authentication Information Request messages sent by the HSS peer service to the HSS.
AI Answer	The total number of Authentication Information Answer messages received by the HSS peer service from the HSS.
AIR Retries	The total number of Authentication Information Request Retry messages sent by the HSS peer service to the HSS.
AIA Timeouts	The total number of Authentication Information Answer Timeout messages received by the HSS peer service from the HSS.

Field	Description
AIA Dropped	The total number of Authentication Information Answer Dropped messages received by the HSS peer service from the HSS.
CL Request	The total number of Cancel Location Request messages sent by the HSS peer service to the HSS.
CL Answer	The total number of Cancel Location Answer messages received by the HSS peer service from the HSS.
CLR Retries	The total number of Cancel Location Request Retry messages sent by the HSS peer service to the HSS.
CLA Timeouts	The total number of Cancel Location Answer Timeout messages received by the HSS peer service from the HSS.
CLA Dropped	The total number of Cancel Location Answer Dropped messages received by the HSS peer service from the HSS.
ISD Request	The total number of Insert Subscriber Data Request messages received by the HSS peer service from the HSS.
ISD Answer	The total number of Insert Subscriber Data Answer messages sent by the HSS peer service to the HSS.
ISDR Retries	The total number of Insert Subscriber Data Request Retry messages received by the HSS peer service from the HSS.
ISDA Timeouts	The total number of Insert Subscriber Data Answer Timeout messages sent by the HSS peer service to the HSS.
ISDA Dropped	The total number of Insert Subscriber Data Answer Dropped messages sent by the HSS peer service to the HSS.
DSD Request	The total number of Delete Subscriber Data Request messages received by the HSS peer service from the HSS.
DSD Answer	The total number of Delete Subscriber Data Answer messages sent by the HSS peer service to the HSS.
DSDR Retries	The total number of Delete Subscriber Data Request Retry messages received by the HSS peer service from the HSS.
DSDA Timeouts	The total number of Delete Subscriber Data Answer Timeout messages sent by the HSS peer service to the HSS.
DSDA Dropped	The total number of Delete Subscriber Data Answer Dropped messages sent by the HSS peer service to the HSS.
R Request	The total number of Reset Request messages received by the HSS peer service from the HSS.
R Answer	The total number of Reset Answer messages sent by the HSS peer service to the HSS.
RR Retries	The total number of Reset Request Retry messages received by the HSS peer service from the HSS.
RA Timeouts	The total number of Reset Answer Timeout messages sent by the HSS peer service to the HSS.
RA Dropped	The total number of Reset Answer Dropped messages sent by the HSS peer service to the HSS.
N Request	The total number of Notify Request messages sent by the HSS peer service to the HSS.
N Answer	The total number of Notify Answer messages received by the HSS peer service from the HSS.
NR Retries	The total number of Notify Request Retry messages sent by the HSS peer service to the HSS.
NA Timeouts	The total number of Notify Answer Timeout messages received by the HSS peer service from the HSS.

■ show hss-peer-service statistics all

Field	Description
NA Dropped	The total number of Notify Answer Dropped messages received by the HSS peer service from the HSS.
MIC Request	The total number of Mobile Identity Check Request messages sent by the HSS peer service to the HSS.
MIC Answer	The total number of Mobile Identity Check Answer messages received by the HSS peer service from the HSS.
MICR Retries	The total number of Mobile Identity Check Request Retry messages sent by the HSS peer service to the HSS.
MICA Timeouts	The total number of Mobile Identity Check Answer Timeout messages received by the HSS peer service from the HSS.
MICA Dropped	The total number of Mobile Identity Check Answer Dropped messages received by the HSS peer service to the HSS.
Message Error Stats	
Unable To Comply	The total number of Update Location Answer messages containing the result code “Unable To Comply” received by the HSS peer service from the HSS.
Auth Data Unavailable	The total number of Update Location Answer messages containing the result code “Auth Data Unavailable” received by the HSS peer service from the HSS.
User Unknown	The total number of Update Location Answer messages containing the result code “User Unknown” received by the HSS peer service from the HSS.
Equipment Unknown	The total number of Update Location Answer messages containing the result code “Equipment Unknown” received by the HSS peer service from the HSS.
Unknown EPS Subscription	The total number of Update Location Answer messages containing the result code “Unknown EPS Subscription” received by the HSS peer service from the HSS.
RAT Not Allowed	The total number of Update Location Answer messages containing the result code “RAT Not Allowed” received by the HSS peer service from the HSS.
Authorization Rejected	The total number of Update Location Answer messages containing the result code “Authorization Rejected” received by the HSS peer service from the HSS.
Roaming Not Allowed	The total number of Update Location Answer messages containing the result code “Roaming Not Allowed” received by the HSS peer service from the HSS.
Other Errors	The total number of Update Location Answer messages containing the result code “Other Errors” received by the HSS peer service from the HSS.

Chapter 110

show ims-authorization

This chapter describes the outputs of the `show ims-authorization` command.

show ims-authorization policy-control statistics

Table 280. show ims-authorization policy-control statistics Command Output Descriptions

Field	Description
DPCA Session Stats	
Total Current Sessions	The total number of DPCA session currently running on this system.
Total IMSA Adds	The total number of IP multimedia subsystem applications (IMSAs) added to service.
Total DPCA Starts	The total number of Diameter Policy Control Applications (DPCAs) started.
Total Secondary Create	The total number of secondary contexts created.
Total Secondary Terminate	The total number of secondary contexts deleted.
Total Session Updates	The total number of updates applied for session/s.
Total Terminated	The total number of Diameter Policy Control Application sessions terminated.
DPCA Session Failovers	The total number of Diameter Policy Control Application sessions failed.
DPCA Message Stats	
Total messages Received	Total policy control messages received for IMS authorization policy control.
Total Messages Sent	Total messages sent to IMS authorization policy control server.
Total CCR	Total Credit Control Request (CCR) messages received.
Total CCA	Total Credit Control Answer (CCA) messages sent in response to CCRs.
CCR-Initial	Total number of initial CCR messages received.
CCA-Initial	Total number of initial CCA messages sent in response to initial CCR messages.
CCA-Initial Accept	Total number of initial CCA messages accepted in response to initial CCR messages.
CCA-Initial Reject	Total number of initial CCA messages rejected in response to initial CCR messages.
CCA-Initial Timeouts	Total number of initial CCA messages timed out in response to initial CCR messages.
CCR-Update	Total number of Credit Control Request (CCR) messages received after initial CCR for update.
CCA-Update	Total Credit Control Answer (CCA) messages sent in response to update CCRs.
CCA-Update Timeouts	Total Credit Control Answer (CCA) messages sent in response to update CCRs but timed out.
CCA-Update Errors	Total number of errors in parsing the CCA-Update Message.

Field	Description
CCR-Final	Total number of final CCR messages received to end application.
CCA-Final	Total number of final CCA messages sent in response to final CCR messages to end session/s.
CCA-Final Timeouts	Total number of final CCA messages sent in response to final CCR messages to end session/s but timed out.
CCA-Final Errors	Total number of errors in parsing the CCA-Terminate Message.
ASR	Total number of Abort-Session-Requests (ASRs) received.
ASA	Total number of Abort-Session-Accept (ASA) messages sent in response to Abort-Session-Requests (ASRs).
RAR	Total number of Re-Auth-Requests (RARs) received for re-authorization.
RAA	Total number of Re-Auth-Requests (RARs) answered with Re-Auth-Answer (RAA) message.
DPCA Message Error Stats	
Diameter Protocol Errs	Total number of errors related to Diameter protocol.
Bad Answers	Total number of errors related to invalid response/answers.
Unknown Session Reqs	Total number of errors related to unknown session requests.
Unknown Command Code	Total number of errors related to unknown command codes.
Unsupported Command Code	Total number of errors related to unsupported command codes.
Unk Failure Handling	Total number of errors related to unknown handling of failures.
DPCA Termination Cause Stats	
Diameter Logout	Total number of DPCA session termination due to Diameter logout.
Service Not Provided	Total number of DPCA session termination due to unavailability of service.
Bad Answer	Total number of DPCA sessions terminated due to invalid/bad response reason.
Administrative	Total number of DPCA sessions terminated due to administrative reasons.
Link Broken	Total number of DPCA sessions terminated due to link broken.
Auth Expired	Total number of DPCA sessions terminated due to authorization expired.
User moved	Total number of DPCA sessions terminated as subscriber/user moved to unknown/non-service area.
Session Timeout	Total number of DPCA sessions terminated due to timed out reason.
Auth Rejected	Total number of DPCA sessions terminated due to authorization rejected.
Other Errors	Total number of DPCA sessions terminated due to unknown reasons or reasons not listed in this list.

Field	Description
DPCA Experimental Result Code Stats:	Statistics of the number of times the specific Experimental-Result-Code value was received in the Diameter Gx Credit-Control-Answer (CCA) from the PCRF per IMSA service.
Error Initial Parameters	The number of times DIAMETER_ERROR_INITIAL_PARAMETERS (5140) Experimental-Result-Code value was received in the Diameter Gx CCA.
Error Trigger Event	The number of times DIAMETER_ERROR_TRIGGER_EVENT (5141) Experimental-Result-Code value was received in the Diameter Gx CCA.
Bearer Not Authorized	The number of times DIAMETER_ERROR_BEARER_NOT_AUTHORIZED (5143) Experimental-Result-Code value was received in the Diameter Gx CCA.
Traffic Mapping Rejected	The number of times DIAMETER_ERROR_TRAFFIC_MAPPING_INFO_REJECTED (5144) Experimental-Result-Code value was received in the Diameter Gx CCA.
PCC Rule Event	The number of times DIAMETER_PCC_RULE_EVENT (5142) Experimental-Result-Code value was sent in the Diameter Gx Re-Auth-Request (RAR).
Conflicting Request	This error is used when the PCRF cannot accept the UE-initiated resource request as a network-initiated resource allocation is already in progress with packet filters that cover the packet filters in the received UE-initiated resource request.
Bearer Event	This error is used when a PCC rule for some reason cannot be enforced or modified successfully in a network initiated procedure.
Bad Exp Result Code	The number of times an unknown Experimental-Result-Code value (apart from the ones recognized in CCA that are listed above PCC Rule Event) was received in the Diameter CCA.
Session Release Cause	
Unspecified Reason	The total number of sessions released due to unspecified reasons.
UE Subscription Changed	The total number of sessions released due to a change in the UE subscription.
Insuffent Srvr Resource	The total number of sessions released due to insufficient server resources.
DPCA Failure Handling Stats	
Connection Based FH	
Total Message Timeouts	Total number of response message timeouts, i.e. PCRF failed to respond within the configured timeout value.
CCA-Initial	Response to the CCR-I message was timed out.
CCA-Update	Response to the CCR-U message was timed out.
CCA-Terminate	Response to the CCR-T message was timed out.
Total Message Send Errs	Total number of requests failed to be sent due to socket based send errors.
CCR-Initial	CCR-I failed to be sent due to socket based errors.
CCR-Update	CCR-U failed to be sent due to socket based errors.
CCR-Terminate	CCR-T failed to be sent due to socket based errors.

Field	Description
Result Code Based FH	
Configured Result Code	Failure handling being undertaken due to configured result code range.
CCA-Initial	Failure handling being undertaken due to configured result code range for CCA-Initial messages.
CCA-Update	Failure handling being undertaken due to configured result code range for CCA-Update messages.
CCA-Terminate	Failure handling being undertaken due to configured result code range for CCA-Terminate messages.
Unh and Unk Result Code	Failure handling being undertaken due to a result code which is neither defined in the diameter or customer specs.
CCA-Initial	Failure handling being undertaken due to unknown result code for CCA-Initial messages.
CCA-Update	Failure handling being undertaken due to unknown result code for CCA-Update messages.
CCA-Terminate	Failure handling being undertaken due to unknown result code for CCA-Terminate messages.
FH Behavior	
Continue	Total number of times the failure handling action continue has been undertaken.
Retry-And-Continue	Total number of times the failure handling action retry-and-continue has been undertaken.
Retry-And-Terminate	Total number of times the failure handling action retry-and-terminate has been undertaken.
Terminate	Total number of times the failure handling action terminate has been undertaken.
Peer Switches	
Attempted Switches	Total number of peer switches attempted.
Successful Switches	Total number of peer switches successful.

show ims-authorization policy-gate status full



Important: This command is no longer an option in StarOS release 11.0 and beyond.

Table 281. show ims-authorization policy-gate status full Command Output Descriptions

Field	Description
CallID	Specifies Call Identifier.
IMSI	Specifies International Mobile Subscriber Identity (IMSI) of subscriber.
NSAPI	Specifies Network Service Access Point Identifier (NSAPI) to a single PDP context of the subscriber.
Charging Rule	Specifies dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service.
Precedence	Displays the precedence of the dynamic charging rule applicable to specific flow.
Flow Status	Specifies the status of flow with specific charging rule. Possible states are: • Open • Closed • Dormant
Flow Dir	Specifies the direction of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service. Possible states are: • Uplink • Downlink
Source Addr	Specifies the source IP address of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service.
Source Addr Mask	Specifies the masking of source IP address of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service.
Destination Addr	Specifies the destination IP address of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service.
Destination Addr Mask	Specifies the masking of destination IP address of flow with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service.
Source Port	Specifies the IP port of flow origin with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service.
Destination Port	Specifies the destination IP port of flow end with specific dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service.

show ims-authorization policy-gate counters all



Important: This command is no longer an option in StarOS release 11.0 and beyond.

Table 282. show ims-authorization policy-gate counters all Command Output Descriptions

Field	Description
CallID	Specifies Call Identifier.
IMSI	Specifies International Mobile Subscriber Identity (IMSI) of subscriber.
NSAPI	Specifies Network Service Access Point Identifier (NSAPI) to a single PDP context of the subscriber.
Charging Rule	Specifies dynamic charging rule applicable for specific flow through a policy gate in IMS authorization service.
Gate State changed	Displays the change state of policy gate for specific subscriber flow. Possible values are: 0: No change 1: Changed
Uplink Pkts Statistics	Displays the statistics of packets in uplink direction.
Downlink Pkts Statistics	Displays the statistics of packets in downlink direction.
Pkts processed	Displays the total number of packets received and processed.
Bytes processed	Displays the total number of bytes received and processed.
Pkts dropped	Displays the total number of packets received but dropped.
Bytes dropped	Displays the total number of bytes received but dropped.

show ims-authorization servers

Table 283. show ims-authorization servers ims-auth-service Command Output Descriptions

Field	Description
Service Name	IMS authorization service name.
IMS Authorization Server	IMS authorization server name.
Server Type	IMS Authorization server type. It may be Policy, Charging, or both.
PCRF host	Identifies the Policy Control and Charging Rules Function (PCRF) host.
Operational State	Indicates operational state of the authorization server.
Server Session State	Indicates authorization server session state.
Server Statistics	Indicates authorization server session statistics.
Session Active	Total number of active authorization server sessions.
Session Opened	Total number of opened authorization server sessions.
Session Closed	Total number of closed authorization server sessions.
Sessions switched due to Tx Expiry	Total number of sessions switched due to transmission expiry.
Sessions switched due to reselection	Total number of sessions switched due to re-selection of authorization servers.
Server Up -> down indications	Total number of servers going to down state from up state.
Total servers matching specified criteria	Total number of servers matching the specified criteria.

show ims-authorization service name

Table 284. show ims-authorization service name Command Output Descriptions

Field	Description
IMS Authorization Service Name	Name of IMS authorization service name.
Context	Name of the context in which IMS authorization service is configured.
Service State	State of the IMS authorization service.
Service mode	Mode of IMS authorization service for policy and charging.
Binding Mechanism	Describes the mechanism on the control of bearer resources based on a binding mechanism that binds one or more service to a bearer.
QoS Update Timeout	Specifies the timeout duration in seconds to discard QoS update request. NOTE: QoS Update Timeout is no longer shown in StarOS release 11.0 and beyond.
Reauth Trigger	Specifies the Re-authorization trigger's status.
P-CSCF Discovery	Specifies the configured route-table applicable for Proxy-Call Session Control Function (P-CSCF) discovery.
P-CSCF Selection Table[<i>n</i>]	Specifies the configured selection table information for Proxy-Call Session Control Function (P-CSCF) server selection. [<i>n</i>] indicates the selection table number.
Diameter Policy Control Specifies Diameter Policy Control related configuration and information.	
Endpoint	Specifies Diameter endpoint name for Diameter Policy Control.
Origin-Realm	Specifies Diameter origin domain name for Diameter Policy Control.
Dictionary	Specifies the configured applicable dictionary for Diameter Policy Control.
Update-Dictionary-Avps	Indicates whether the 3GPP Rel. 8 AVPs, 3GPP Rel. 9 AVPs are selected for encoding.
Request Timeout	Indicates the configured request timeout value.
Reauth Trigger	Indicates the re-authorization trigger status.
Custom Reauth Trigger	Indicates enabled custom reauth event triggers.
Failure Handling	Specifies the configured mechanism for failure handling in Diameter Policy Control.
Peer Switch	Specifies the status of Peer switching for in Diameter Policy Control.  Important: This field has been deprecated in 8.1 and later releases.
Host Selection	Specifies host selection mechanism with selection table.

Field	Description
Host Reselection Subscriber Limit	Specifies the limit of subscriber bind to specific host origin to trigger re-selection of host.
Host Reselection Interval	Specifies time interval to trigger host re-selection for subscriber.
Host Selection Table[<i>n</i>]	Specifies the configured selection table information for host server selection. [<i>n</i>] indicates the selection table number.
Precedence	Specifies the precedence applicable.
Primary Host	Specifies the primary name/IP address the host.
Secondary Host	Specifies the secondary name/IP address of the host.

show ims-authorization sessions full all

Table 285. show ims-authorization sessions full all Command Output Descriptions

Field	Description
CallId	The call identifier.
Service Name	The IMS authorization service name.
IMSI	The International Mobile Subscriber Identity (IMSI) of subscriber.
Session ID	The session ID is of type UTF8String and is used to identify a specific session.
NSAPI	The Network Service Access Point Identifier (NSAPI) to a single PDP context of the subscriber.
Bearer Usage	Indicates the bearer usage for this session.
Bearer Type	Indicates the bearer type.
Bearer ID	Indicates the bearer identifier.
Context Type	Indicates the PDP context type: Primary or Secondary.
SGSN IP-Addr	IP address of the SGSN node.
APN	Indicates the Access Point Name (APN) for this service.
Bearer Control Mode	The bearer control mode: UE/NW
State	Indicates the session state.
Primary PCRF Server	The primary Policy Control and Charging Rules Function (PCRF) server host name.
Secondary PCRF Server	The secondary PCRF server host name.
Primary P-CSCF	The primary Proxy-Call Session Control Function gateway address.
Secondary P-CSCF	The secondary P-CSCF gateway address.
UE IP Address	
UE IP Session Type	Specifies the type of the address assigned to the user. The possible valid values are IPv4, IPv6 and IPv4_IPv6.
IPv4 Address	Displays the IPv4 address assigned to the user.
IPv6 Address	Displays the IPv6 address assigned to the user.
Primary OCS	
Hostname	Specifies the Primary-Event-Charging-Function-Name of type DiameterURI, or the address of primary online charging system.
Port	The port associated with the primary OCS.
Protocol	The protocol associated with the primary OCS.
Secondary OCS	

■ show ims-authorization sessions full all

Field	Description
Hostname	Specifies the Secondary-Event-Charging-Function-Name of type DiameterURI, or the address of secondary online charging system.
Port	The port associated with the secondary OCS.
Protocol	The protocol associated with the secondary OCS.
Primary CCF	
Hostname	Specifies the Primary-Charging-Collection-Function-Name of type DiameterURI or the address of primary offline charging system for the bearer.
Port	The port associated with the primary CCF.
Protocol	The protocol associated with the primary CCF.
Secondary CCF	
Hostname	Specifies the Secondary-Charging-Collection-Function-Name of type DiameterURI or the address of secondary offline charging system for the bearer.
Port	The port associated with the secondary CCF.
Protocol	The protocol associated with the secondary CCF.
Auth Decision	Parameters configured for authorization decision.
Event Triggers	Triggers for different events for Authorization decision.
Event Report Indication	Specifies which type of changes will trigger an event report from the PCRF.
QoS Policy	Specifies QoS policy for specific session.
QoS Class	The QoS class applicable to this session.
Max Uplink Bw(in bps)	The maximum bandwidth for uplink direction, in bps.
Max Downlink Bw(in bps)	The maximum bandwidth for downlink direction, in bps.
Guaranteed Uplink Bw(in bps)	The guaranteed bandwidth for uplink direction, in bps.
Guaranteed Downlink Bw(in bps)	The guaranteed bandwidth for downlink direction, in bps.
Apn Uplink AMBR(in bps)	The APN uplink AMBR, in bps.
Apn Downlink AMBR(in bps)	The APN downlink AMBR, in bps.
Charging Rules	Dynamic charging rule applicable for specific session in IMSA service. NOTE: Charging Rules are no longer shown in StarOS release 11.0 and beyond.
Rule Name	Name of the applicable dynamic charging rule.
Precedence	Precedence of the applicable dynamic charging rule.
Revalidation Time	Specifies the time at which the next CCR-U will be sent out for the Re-validation Timeout EVENT TRIGGER.

Field	Description
Session Packet Statistics	Specifies the session data statistics. NOTE: Session Packet Statistics are no longer shown in StarOS release 11.0 and beyond.
Uplink Pkt Processed	Total number of packets processed in uplink direction.
Uplink Bytes Processed	Total number of bytes processed in uplink direction.
Uplink Pkt Dropped	Total number of packets dropped or not processed in uplink direction.
Uplink Bytes Dropped	Total number of bytes dropped or not processed in uplink direction.
Downlink Pkt Processed	Total number of packets processed in downlink direction.
Downlink Bytes Processed	Total number of bytes processed in downlink direction.
Downlink Pkt Dropped	Total number of packets dropped or not processed in downlink direction.
Downlink Bytes Dropped	Total number of bytes dropped or not processed in downlink direction.
Total sessions matching specified criteria	The total number of sessions matching the specified criteria.

Chapter 111

show ip

This chapter describes the outputs of the **show ip** command.

show ip interface

Table 286.show ip interface Command Output Descriptions

Field	Description
IntfName	Indicates the name of the IP interface for which information is displayed.
IntfType	Indicates the type of IP interface for which information is displayed. Possible types are: • broadcast • loopback • point-to-point • tunnel
Description	Indicates the provided description for specific interface name.
VRF	Indicates the name of the configured virtual routing and forwarding (VRF) table for this IP interface.
IP State	Indicates the state of the IP interface. Possible values are: • UP • DOWN
IP Address	Indicates the primary IP address bound with this IP interface in IPv4/IPv6 notation.
Number of Secondary Addresses	Indicates the total number of secondary IP addresses bound with this IP interface.
Secondary IP Addresses	Indicates the secondary IP address bound with this IP interface in IPv4/IPv6 notation. This will be display only when secondary IP addresses are configured for this interface.

show ip interface gre-keepalive

Table 287. show ip interface gre-keepalive Command Output Descriptions

Field	Description
IntfName	Indicates the name of the IP interface for which information is displayed.
IntfType	Indicates the type of IP interface for which information is displayed. Possible types are: • broadcast • loopback • point-to-point • tunnel
Description	Indicates the provided description for specific interface name.
VRF	Indicates the name of the configured virtual routing and forwarding (VRF) table for this IP interface.
IP State	Indicates the state of the IP interface. Possible values are: • UP • DOWN
IP Address	Indicates the primary IP address bound with this IP interface in IPv4/IPv6 notation.
Number of Secondary Addresses	Indicates the total number of secondary IP addresses bound with this IP interface.
Secondary IP Addresses	Indicates the secondary IP address bound with this IP interface in IPv4/IPv6 notation. This will be displayed only when secondary IP address(es) are configured for this interface.
GRE Keepalives sent after receiving last response	Indicates the total number of GRE keepalive requests sent after last response was received.
Time remaining before sending next GRE Keepalive request	Indicates the time duration in seconds left after which next GRE keepalive request will be sent.
Time elapsed since last Keepalive from the remote	Indicates the time in seconds lapsed after last keepalive received from the remote node of GRE tunnel.
Total Number of GRE Keepalive requests sent	Indicates the total number of GRE keepalive requests sent by this node to remote GRE tunnel node during this session.
Total Number of GRE Keepalive responses received	Indicates the total number of GRE keepalive responses, in response to GRE keepalive requests from this node, received on this interface from remote GRE tunnel node during this session.
Total Number of GRE Keepalive requests received	Indicates the total number of GRE keepalive requests from remote GRE tunnel node, received by this node on this interface during this session.
Total Number of GRE Keepalive responses sent	Indicates the total number of GRE keepalive responses, in response to GRE keepalive requests from remote GRE tunnel node, sent by this node to remote GRE tunnel node during this session.

■ show ip interface gre-keepalive

show ip pool address pool-name

Table 288. show ip pool address pool-name Command Output Descriptions

Field	Description
Busyout	Defines whether or not the associated IP address is unavailable due to a busyout command having been applied to the entire pool or a range of addresses within the pool.
Status	Identifies the current condition of the IP address. Valid conditions are: (F) - Free: IP address is available for use. (U) - Used: IP address is currently in use and is unavailable. (H) - Hold: IP address is unavailable and on hold for the subscriber that just disconnected in case a reconnect occurs within the range of the address-hold-timer value configured in the ip pool command. (R) - Release: IP address is in the process of being released (from general use or the hold state).
Address	Displays the IP address.
NAI/MSID Hash	A 64-bit value identifying the subscriber's MN in order to reapply a specific IP address should the subscriber return within the hold timer range.
Hold Timer	Specifies the amount of time, in seconds, that the IP address is placed on hold in the event that the subscriber, who last used the address, reconnects.
Session Start/Disconnect	Displays the session start time for IP addresses in use and the session disconnect time for IP addresses on hold.

show ip pool summary

Table 289. show ip pool summary Command Output Descriptions

Field	Description
Type	Identifies the type of IP address pool. (P) - Public: Indicates that the pool is comprised of public IP addresses. (R) - Private: Indicates that the pool is comprised of private IP addresses. (S) - Static: Indicates that the pool is comprised of statically assigned IP addresses. (E) - Resource: Indicates that the pool is comprised of resource IP addresses. (N) - NAT: Indicates that the pool is comprised of NAT IP addresses.
State	Identifies the state of the IP address pool. (G) - Good: Indicates that the pool is ready to provide addresses. (D) - Pending Delete: Indicates that the pool is in the process of being deleted. (R) - Resizing: Indicates that the pool is in the process of being resized. (I) - Inactive: Indicates that the pool is not being used.
Priority	Specifies the priority use of a public or private pool. Pools with lower priority numbers are used first.
Busyout	Indicates whether or not the pool has been configured for busyout.
Pool Name	Identifies the name of the IP address pool.
Start Address	Identifies the starting IP address of the pool.
Mask/End Address	Identifies the subnet mask or the ending IP address of the pool.
Used	Specifies the number of IP addresses currently in use.
Avail	Specifies the number of IP addresses currently available for use.
Total Pool Count	Specifies the total number of IP address pools in the summary.

show ip pool verbose

Table 290. show ip pool verbose Command Output Descriptions

Field	Description
Group Summary	
Group Used	Specifies the number of IP addresses within the group that are currently in use.
Group Free	Specifies the number of IP addresses within the group that are currently available.
Group Hold	Specifies the number of IP addresses in the group that are unavailable and on hold for the subscribers that just disconnected in case a reconnect occurs within the range of the address-hold-timer value configured in the ip pool command.
Group Released	Specifies the number of IP addresses in the group that are in the process of being released (from general use or the hold state).
Group Effective Alarm Threshold %	Identifies the alarm threshold for the group. This parameter is based on the configured threshold of the first IP pool used in the group.
Group Effective Clear Threshold %	Identifies the clear threshold for the group. This parameter is based on the configured threshold of the first IP pool used in the group.
Group Current Usage %	Identifies the percentage of IP addresses currently in use within the group.
Group Status	Identifies the status of the group. (G) - Good: Indicates that the pool is ready to provide addresses. (D) - Pending Delete: Indicates that the pool is in the process of being deleted. (R) - Resizing: Indicates that the pool is in the process of being resized. (I) - Inactive: Indicates that the pool is not being used.
Group	Identifies the group by name.
Pool	Identifies the name of the IP Pool.
Start Address/End Address or mask	Identifies the starting IP address and the ending IP address (or the subnet mask) of the pool.
Pool Status	Identifies the status if the IP address pool. Good: Indicates that the pool is ready to provide addresses. Pending Delete: Indicates that the pool is in the process of being deleted. Resizing: Indicates that the pool is in the process of being resized. Inactive: Indicates that the pool is not being used.
Type	Identifies the type of IP address pool. Public: Indicates that the pool is comprised of public IP addresses. Private: Indicates that the pool is comprised of private IP addresses. Static: Indicates that the pool is comprised of statically assigned IP addresses. Resource: Indicates that the pool is comprised of resource IP addresses. NAT: Indicates that the pool is comprised of NAT IP addresses.

Field	Description
Priority	Identifies the priority of the IP pool (0 = highest, 10 = lowest)
Group	Identifies the group to which the IP pool belongs.
VRF	Identifies the VRF name.
Used	Specifies the number of IP addresses currently in use in this pool.
Free	Specifies the number of IP addresses currently available for use in this pool.
Hold	Specifies the number of IP addresses currently unavailable and on hold for the subscribers that just disconnected in case a reconnect occurs within the range of the address-hold-timer value configured in the ip pool command.
Released	Specifies the number of IP addresses in this pool that are in the process of being released (from general use or the hold state).
Addr-Hold-Timer	Identifies the address-hold-timer value configured in the ip pool command.
Limit Exceeded	Specifies the number of times the hold timer limit was exceeded and the IP address being held was returned to an available or free state.
Total Alloc Req	Specifies the total number of IP address requests made to this pool.
Total Rel Req	Specifies the total number of IP address release requests made to this pool.
Input Label	Identifies the input label for the VRF.
Output Label	Identifies the output label for the VRF.
Network Reachability Detection Server	Identifies the name of a configured network reachability server that is bound to the IP pool.
Unicast Gratuitous-ARP Address	Identifies if the ability to perform a unicast gratuitous ARP to the specified IP address rather than broadcast gratuitous ARP when gratuitous ARP generation is required is enabled for this pool.
Nexthop Forwarding Address	Identifies the IP address of the next hop gateway where a subscriber that is assigned an IP address from this pool is forwarded.
Vlan ID	Identifies the VLAN ID that enables over-lapping IP address pool support and associates the pool with the specified virtual LAN (VLAN).
Suppress-Switchover-ARPS	Identifies if the ability to suppress corresponding gratuitous ARP generation when a line card switchover occurs is enabled or disabled for this pool.
Send-ICMP-Dest-Unreachable	Specifies whether or not an ICMP destination unreachable PDU is generated when the system receives a PDU destined for an unused address within the pool.
Explicit-Route-Advertise	If a pool is configured with this option, then none of the fragment addresses for this pool are added to the kernel. However, the fragment addresses are added to the NPU. As the calls come up and addresses from this pool (with the new option) are used, these addresses are added to the kernel.
Advertise-if-used	Indicates if the option is enabled to use advertise address or not.
Include-Network-Broadcast-Address	Indicates whether IP pool is configured to include network broadcast address or not.
Allow-Static-Allocation	Indicates whether IP pool configured to allow static allocation of IP address or not.

Field	Description
Group Available Threshold	Specifies the low threshold IP pool utilization percentage that must be met or passed within the polling interval to generate an alert or alarm. Clear: Specifies the high threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage rises above the high threshold within the polling interval, a clear alarm will be generated.
Pool-Free Threshold	Specifies the low threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the high threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage rises above the high threshold within the polling interval, a clear alarm will be generated.
Pool-Used Threshold	Specifies the high threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the low threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage falls beneath the low threshold within the polling interval, a clear alarm will be generated.
Pool-Release Threshold	Specifies the high threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the low threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage falls beneath the low threshold within the polling interval, a clear alarm will be generated.
Pool-Hold Threshold	Specifies the high threshold IP pool utilization percentage that must be met or exceeded within the polling interval to generate an alert or alarm. Clear: Specifies the low threshold IP pool utilization percentage that maintains a previously generated alarm condition. If the utilization percentage falls beneath the low threshold within the polling interval, a clear alarm will be generated.

Chapter 112

show ipsg

This chapter describes the outputs of the **show ipsg** commands.

show ipsg service all

Table 291. show ipsg service all Command Output Descriptions

Field	Description
Service name	Name of the IPSG service.
Context	Name of the context in which the IPSG service is configured.
Bind	The binding status of the service. Indicates if the service has been bound to the appropriate interfaces (RADIUS-Server mode) or to any interface in the context (RADIUS-Snoop mode).
Max Subscribers	The total number of subscribers allowed for the service. This field displays a configured number or, if not configured, the total amount specified by the IPSG service license.
Mode	The IPSG service mode type: radius-server or radius-snoop
Address	The IP address of the interface where RADIUS Accounting-Request messages are received.
Port	The port number of the interface where RADIUS Accounting -Request messages are received.
Source-Context	The source context with the interface where RADIUS Accounting-Request messages are received.
Default Subscriber	The default subscriber for the context.
Service Status	The status of the IPSG service. Indicates if the service has been started.

show ipsg sessions counters all

Table 292. show ipsg sessions counters all Command Output Descriptions

Field	Description
RADIUS Accounting:	
Total START Req rcvd	Total number of RADIUS Accounting-Start Request messages received since the last system restart or clear command.
Total START Req (Retransmitted) rcvd	Total number of retransmitted RADIUS Accounting-Start Request messages received.
Total START Rsp Sent	Total number of RADIUS Accounting-Start Response messages sent by this system.
Total INTERIM Updt rcvd	Total number of RADIUS Accounting-Interim Update messages received.
Total Acct On Req rcvd	Total number of RADIUS Accounting-On Request messages received.
Total Acct On Req (Retransmitted) rcvd	Total number of retransmitted RADIUS Accounting-On Request messages received.
Total Acct On Response sent	Total number of RADIUS Accounting-On Response messages sent.
Total Acct Off Req rcvd	Total number of RADIUS Accounting-Off Request messages received.
Total Acct Off Req (Retransmitted) rcvd	Total number of retransmitted RADIUS Accounting-Off Request messages received.
Total Acct Off Response sent	Total number of RADIUS Accounting-Off Response messages sent.
Total STOP Req rcvd	Total number of RADIUS Accounting-Stop Request messages received.
Total ACCESS Req rcvd	Total number of IPSG RADIUS Access-Request messages received.
Total ACCESS Req (Retransmitted) rcvd	Total number of retransmitted IPSG RADIUS Access-Request messages received.
Total Access-Accept sent	Total number of IPSG RADIUS Access-Accept messages sent.
Total Access-Reject sent	Total number of IPSG RADIUS Access-Reject messages sent.
Total Response sent	Total number of RADIUS accounting response messages sent.

show ipsg statistics

Table 293. show ipsg statistics Command Output Descriptions

Field	Description
RADIUS Message Statistics:	
Total START Req rcvd	Total number of RADIUS Accounting-Start Request messages received since the last system restart or clear command.
Total START Req (Retransmitted) rcvd	Total number of retransmitted RADIUS Accounting-Start Request messages received.
Total START Rsp Sent	Total number of RADIUS Accounting-Start Response messages sent by this system.
Total INTERIM Updt rcvd	Total number of RADIUS Accounting-Interim Update messages received.
Total STOP Req rcvd	Total number of RADIUS Accounting-Stop Request messages received.
Total Acct On req rcvd	Total number of RADIUS Accounting-On Request messages received.
Total Acct On req (Retransmitted) rcvd	Total number of retransmitted RADIUS Accounting-On Request messages received.
Total Acct On Response sent	Total number of RADIUS Accounting-On Response messages sent.
Total Acct OffReq rcvd	Total number of RADIUS Accounting-Off Request messages received.
Total Acct OffReq (Retransmitted) rcvd	Total number of retransmitted RADIUS Accounting-Off Request messages received.
Total Acct OffResponse sent	Total number of RADIUS Accounting-Off Response messages sent.
Total ACCESS Req rcvd	Total number of IPSG RADIUS Access-Request messages received.
Total ACCESS Req (Retransmitted) rcvd	Total number of retransmitted IPSG RADIUS Access-Request messages received.
Total Access-Accept sent	Total number of IPSG RADIUS Access-Accept messages sent.
Total Access-Reject sent	Total number of IPSG RADIUS Access-Reject messages sent.
Total UNKNOWN req rcvd	Total number of unknown request messages received.
Total Response sent	Total number of RADIUS accounting response messages sent.
Total Discarded	Total number of messages discarded.
Mandatory Attr Missing	Total number of messages discarded because of missing mandatory attribute.
Interim For Non-Existing Session	Total number of RADIUS Accounting-Interim messages discarded, when there is no session existing.
Stop For Non-Existing Session	Total number of RADIUS Accounting-Stop messages discarded, when there is no session existing.
Unknown Client	Total number of messages discarded because they were received from an unknown client.

Field	Description
Interconnect shared secret	Total number of RADIUS requests discarded, because the shared secret was incorrect.

Chapter 113

show ipv6

This chapter describes the outputs of the **show ipv6** command.

show ipv6 interface summary

Table 294. show ipv6 interface summary Command Output Descriptions

Field	Description
Intfname	Interface name
IntfType	Interface type
Description	
Router Advertisement	Displays whether the system is sending router advertisements. Options are either enabled or disabled.
IP State	Displays the IP state (UP/DOWN) and binding detail
MTU	The subscriber's maximum transmission unit (MTU) size in octets.
IPv6 Link-Local Address:	Displays the IPv6 link-local address
IPv6 Global Unicast Address:	Displays the ipv6 Global Unicast Address address

show ipv6 neighbors

Table 295. show ipv6 neighbors Command Output Descriptions

Field	Description
Address	IPv6 address from table
Type	Interface type: • Broadcast (Ethernet) • Loopback
Link address	MAC address
Flags	One of the following flag codes: • I = Incomplete • R = Reachable • M = Permanent • S = Stale • D = Delay • P = Probe • F = Failed
Interface	Interface name

show ipv6 route

Table 296.show ipv6 route Command Output Descriptions

Field	Description
Destination	Designating ipv6 addressprefix/length
Next hop	Address of the directly connected next hop interface
Protocol	Connected Unconnected
Prec	Number of precedence bits set
Cost	Number of router hops to destination address
Interface	Name of the next hop interface
Total Route Count	Total number of routes Number connected Number of static routes

Chapter 114

show l2tp

This chapter describes the outputs of the **show l2tp** command.

show l2tp sessions

Table 297. show l2tp sessions Command Output Descriptions

Field	Description
L2TP Summary	
Sessions In Progress	The total number of L2TP sessions currently being facilitated by the system.
Data Stats	
Rx Data Pkts	The total number of data packets received.
Tx Data Pkts	The total number of data packets transmitted.
Rx Data Octs	The total number of data octets received.
Tx Data Octs	The total number of data octets transmitted.
Rx Discard Data Pkts	The total number of data packets received and discarded.

show l2tp session full username

Table 298. show l2tp session full username Command Output Descriptions

Field	Description
Username	The username of a currently active subscriber session.
Callid	The call identification number (callid) of a currently active subscriber session.
Msid	The Mobile Station Identification (MSID) number of a currently active subscriber session.
Peer IP Address	The IP address of the LNS to which the subscriber's L2TP session is connected.
Service Name	The name of the LAC-service configured on the system currently facilitating the subscriber's L2TP session.
Context Name	The name of the context where service processing the current session is configured.
Service Type	The type of service type processing the current session. Possible values are: • LAC • LNS
Session State	Indicates the current state of the session as one of the following: • LAC_Established • LAC_IDLE • LAC_WAIT_TUNNEL • LAC_WAIT_REPLY
Local Tunnel ID	The unique, system-assigned identification number of the L2TP tunnel facilitating the session.
Local Session ID	The unique, system-assigned identification number of the L2TP session.
Peer Tunnel ID	The unique, LNS-assigned identification number of the L2TP tunnel facilitating the session.
Peer Session ID	The unique, LNS-assigned identification number of the L2TP session.
Call Type	Indicates the type of session as the following: • LAC-INCOMING: A call arrived at the LAC service from an MS to be tunneled to an LNS.
Call Serial Num	The Call Serial Number attribute value pair (AVP) assigned to the session.
Rx Connect Speed	The speed of the connection from the LNS to LAC service on the system in bits per second (bps).
Tx Connect Speed	The speed of the connection from the LAC service on the system to the LNS in bits per second (bps).

Field	Description
PPP Proxy-Auth	Indicates the protocol used to authenticate the subscriber as one of the following: • CHAP-MD5 • PAP • MS-CHAP
Bearer Type	The Bearer Capabilities AVP for the system indicating the type of interfaces supported.
Framing Type	Indicates the PPP framing type used for the session as one of the following: • ASYNC • SYNC
Data Rx Sequence Num Enabled	Indicates whether or not the use of sequence numbers is enabled for traffic received.
Data Tx Sequence Num Enabled	Indicates whether or not the use of sequence numbers is enabled for traffic transmitted.
Data Rx Sequence Num	If DATA Rx Sequence Num Enabled is enabled, this field displays the current sequence number being processed.
Data Tx Sequence Num	If DATA Tx Sequence Num Enabled is enabled, this field displays the current sequence number being processed.
Rx Data Pkts	The total number of data packets received.
Tx Data Pkts	The total number of data packets transmitted.
Rx Data Octs	The total number of data octets received.
Tx Data Octs	The total number of data octets transmitted.
Rx Discard Data Pkts	The total number of data packets received and discarded.
Total sessions matching specified criteria	The total number of sessions matching the filter criteria (in this example, the subscriber's name).

show l2tp statistics lac-service

Table 299. show l2tp statistics lac-service Command Output Descriptions

Field	Description
LAC Service	The name of the LAC service for which statistics are being displayed.
Tunnels	
Connection Attempts	The total number of attempts made to connect tunnels.
Successful Connections	The total number of tunnels successfully connected.
Failed to Connect	The total number of tunnels that failed to connect.
Active Connections	The total number of tunnels currently connected.
ReceiveCtrl Pkt Errors	
Total Discarded Packets	The Total number of packets that were discarded.
Ctrl Field Errors	The total number of errors received in packet control fields.
Pkt Len Errors	The total number of errors resulting from the receipt of packets of invalid length.
AVP Len Errors	The total number of errors resulting from the receipt of packets containing attribute value pairs (AVPs) of incorrect length.
Proto Ver Errors	The total number of errors resulting from the receipt of packets containing invalid protocol versions.
MD5 Errors	The total number of errors resulting from the receipt of packets containing incorrect Message Digest 5 (MD5) hashing.
Inval Attr Errors	The total number of errors resulting from the receipt of packets containing invalid attributes.
Unknown Attr Errors	The total number of errors resulting from the receipt of packets containing unknown attributes.
Inval SessIDErrors	The total number of errors resulting from the receipt of packets indicating an invalid session identification (ID) number.
Inval State Errors	The total number of errors resulting from the receipt of packets indicating an invalid state.
Unknown Msg Errors	The total number of errors resulting from the receipt of unknown messages.
Unmatch Pkt Len	The total number of errors resulting from the receipt of packets of invalid length.
Inval TunID Errors	The total number of errors resulting from the receipt of packets indicating an invalid tunnel identification (ID) number.
Tunnel Disconnect or Failure Reasons	
General Clear	The total number of tunnels that were disconnected normally (StopCCN result code 1).
Ctrl Conn Exists	The total number of tunnels that failed to connect because the control channel already existed (StopCCN result code 3).

Field	Description
Unauthorized Errors	The total number of tunnels that failed to connect because the requester was not authorized to establish the control channel (StopCCN result code 4).
Bad Protocol Errors	The total number of tunnels that failed to connect because the protocol version of the requester is not supported (StopCCN result code 5).
Requester Shutdown	The total number of tunnels that failed to connect because the requester is being shutdown (StopCCN result code 6).
State Machine Errors	The total number of tunnels that failed to connect because of an error with the finite state machine (StopCCN result code 7).
Wrong Length	The total number of general errors that occurred because the length of the control channel was incorrect (Error code 2).
Out of Range Errors	The total number of general errors that occurred because either one of the values of the field was out of range or the reserved field was non-zero (Error code 3).
InsuffResources	The total number of general errors that occurred because resources were not available to process the request (Error code 4).
Vendor Specific Errors	The total number of general errors that occurred because vendor-specific errors occurred in the LAC (Error code 6).
Try Another LNS	The total number of general errors that occurred because the LNS indicated that the LAC service should attempt to establish the control channel with an alternate LNS (Error code 7).
Unknown AVP with M bit	The total number of general errors that occurred because a session or tunnel was disconnected due to the receipt of an unknown AVP with the M-bit set (Error code 8).
IPSEC Disconnects	When IPsec is used, this is the total number of tunnels that were disconnected or that failed to connect due to the IPsec tunnel being disconnected.
IPSEC Failures	When IPsec is used, this is the total number of tunnels that were disconnected or that failed to connect due to failures that occurred for the IPsec tunnel.
License Exceeded	The number of tunnel attempts that failed because the maximum number of tunnels allowed by the installed license key was reached.
New Call Policy Disc	The total number of L2TP tunnels disconnected because of a new call policy being instituted.
Max Retry Exceeded	The total number of tunnels that failed to connect because the value configured for the max-retransmissions parameter set for the LAC-service was exceeded.
Tunnels System Limit	The total number of tunnels that failed because the maximum number of tunnels that the system supports was reached.
Misc Errors	The total number of errors that occurred that did not fall into any of the above categories.
Last Rx Tunnel Result Code	The last tunnel result code generated for received packets.
Last Rx Tunnel Error Code	The last tunnel error code generated for received packets.
Last Rx Tunnel Err Code Msg	The error indicated by the last tunnel error code generated for received packets.
Last Tx Tunnel Result Code	The last tunnel result code generated for transmitted packets.

Field	Description
Last Tx Tunnel Error Code	The last tunnel error code generated for transmitted packets.
Last Tx Tunnel Err Code Msg	The error indicated by the last tunnel error code generated for transmitted packets.
Sessions	
Session Attempts	The total number of attempts made to connect sessions.
Successful Sessions	The total number of sessions successfully connected.
Failed to Connect	The total number of sessions that failed to connect.
Active Sessions	The total number of sessions currently connected.
Intra-PDSN Handoff Sessions	
Attempts	The total number of attempts to handoff subscriber sessions to another PDSN within this system.
Success	The total number of successful handoffs of subscriber sessions to another PDSN within this system.
Failures	The total number of failures when attempting to handoff subscriber sessions to another PDSN within this system.
Inter-PDSN Handoff Sessions	
Attempts	The total number of attempts were made by outside PDSNs to transfer a call to this PDSN.
Session Disconnect or Failure Reasons	
No General Error:	The total number of normal disconnect with no errors.
Administrative	The total number of sessions that failed to connect due to administrative reasons (CDN result code of 3).
Loss of Carrier	The total number of sessions that were disconnected due to a loss of carrier (CDN result code of 1).
Remote Administrative:	The total number of sessions that failed to connect due to remote administrative reasons.
No Facility Avl Tmp	The total number of sessions that failed to connect due to the temporary lack of required facilities (CDN result code of 4).
No Facility Avl Perm	The total number of sessions that failed to connect due to the permanent lack of required facilities (CDN result code of 5).
Invalid Destination	The total number of sessions that failed to connect due to the specification of an invalid destination (CDN result code of 6).
No Carrier Detected	The total number of sessions that failed to connect because no carrier signal was detected (CDN result code of 7).
Busy Signal	The total number of sessions that failed to connect due to the receipt of a busy signal (CDN result code of 8).
No Dial Tone	The total number of sessions that failed to connect because no dial tone was detected (CDN result code of 9).
LAC Timeout	The total number of sessions that failed to connect within the time allotted by the LAC service (CDN result code of 10).

Field	Description
No Approp Framing	The total number of sessions that failed to connect because no appropriate framing was detected (CDN result code of 11).
No Ctrl Conn	The total number of sessions that failed to connect because no control channel existed (StopCCN result code of 1).
Wrong Length	The total number of general errors that occurred because the length of the control channel was incorrect (Error code 2).
Out of Range	The total number of general errors that occurred because either one of the values of the field was out of range or the reserved field was non-zero (Error code 3).
Insufficient Resources	The total number of general errors that occurred because resources were not available to process the request (Error code 4).
Invalid SessID	The total number of general errors that occurred because of an invalid session identification (ID) number (Error code 5).
Vendor Specific Errors	The total number of general errors that occurred because vendor-specific errors occurred in the LAC (Error code 6).
Try Another LNS	The total number of general errors that occurred because the LNS indicated that the LAC service should attempt to establish the control channel with an alternate LNS (Error code 7).
Unknown AVP with M bit	The total number of general errors that occurred because a session or tunnel was disconnected due to the receipt of an unknown AVP with the M-bit set (Error code 8).
Max Tunnel Limit	The total number of sessions that failed to connect because the number of tunnels supported by the LAC service was exceeded. This parameter is configured for the LAC service using the max-tunnels parameter.
IPSEC Failures	When IPsec is used, this is the total number of sessions that were disconnected or that failed to connect due to failures that occurred for the IPsec tunnel.
IPSEC Disconnects	When IPsec is used, this is the total number of disconnects caused by the IPsec tunnel going down.
New Call Policy Disconnects	The total number of disconnects caused by a newcall policy being implemented.
License Exceeded	The total number of subscriber sessions that failed because the total number of subscriber sessions allowed by the installed license key was exceeded.
Service Mismatch	The total number of subscriber sessions that failed due to a mismatch in the service and the call type.
Misc Errors	The total number of errors that occurred that did not fall into any of the above categories.

show l2tp tunnels all

Table 300. show l2tp tunnels all Command Output Descriptions

Field	Description
State	The state of the tunnel as one of the following: • C : The tunnel is currently connected. • c : The tunnel is in the process of being connected. • d : The tunnel is in the process of being disconnected. • u : The state of the tunnel is unknown.
LocalTun ID	The unique identification number assigned to the tunnel by the system.
PeerTun ID	The unique identification number assigned to the tunnel by the peer LNS.
Active Sess	The number of sessions currently being facilitated by the tunnel.
Peer IP Address	The IP address of the peer-LNS that the tunnel is established with.
Service Name	The name of the LAC-service that established the tunnel.
Uptime	The uptime for connected tunnel.
Total tunnels matching specified criteria	The total number of tunnels facilitated by the context.

show l2tp tunnels full lac-service

Table 301. show l2tp tunnels full lac-service Command Output Descriptions

Field	Description
Local Tunnel ID	The unique identification number assigned to the tunnel by the system.
Peer Tunnel ID	The unique identification number assigned to the tunnel by the peer LNS.
Peer IP Address	The IP address of the peer-LNS that the tunnel is established with.
Service Name	The name of the LAC service that established the tunnel.
Context Name	The context where the LAC service resides.
Uptime	The uptime for connected tunnel.
Service Type	The type of L2TP service. LAC or LNS.
Tunnel State	The state of the tunnel as one of the following: • ESTABLISHED : The tunnel is currently connected. • IDLE : The initial state of the LAC prior to attempting tunnel establishment. • WAIT_CTRL_REPLY : The LAC has sent a tunnel establish request message to the LNS and is waiting for the reply. • CLEARING : The tunnel is being cleared.
Peer Host Name	The name of the LNS with which the tunnel is established.
Peer Vendor Name	The name of the peer's vendor.
Authentication	Indicates the direction of the peer authentication as one of the following: • LOCAL TO REMOTE : From the LAC service to the LNS. • REMOTE TO LOCAL : From the LNS to the LAC service.
Tunnel Initiation	Indicates the direction of the tunnel initiation as one of the following: • LOCAL TO REMOTE : Originated by the LAC service. • REMOTE TO LOCAL : Originated by the LNS.
Callid Hint	The call identification number of a session currently being facilitated by the tunnel.
Ctrl Tx Sequence Num	Indicates the current transmit sequence number for control traffic.
Ctrl Rx Sequence Num	Indicates the current receive sequence number for control traffic.
Ctrl Tx Aced by Peer	Indicates the last transmit sequence number for control traffic acknowledged by the LNS.
Ctrl Rx Aced By Local	Indicates the last receive sequence number for control traffic acknowledged by the LAC service.

Field	Description
Init Peer Rx Win Size	The initial size of the LNS's receive window.
Current Peer Rx Win Size	The current size of the LNS's receive window.
Init Local Rx Win Size	The initial size of the LAC service's receive window.
Last Rx Session Result Code	The last session result code generated for received packets.
Last Rx Session Error Code	The last session error code generated for received packets.
Last Rx Session Err Code Msg	The error indicated by the last session error code generated for received packets.
Last Tx Session Result Code	The last session result code generated for transmitted packets.
Last Tx Session Error Code	The last session error code generated for transmitted packets.
Last Tx Session Err Code Msg	The error indicated by the last session error code generated for transmitted packets.
Session Disconnect or Failure Reasons	
No General Error:	The total number of normal disconnect with no errors.
Administrative	The total number of sessions that failed to connect due to administrative reasons (CDN result code of 3).
Loss of Carrier	The total number of sessions that were disconnected due to a loss of carrier (CDN result code of 1).
Remote Administrative:	The total number of sessions that failed to connect due to remote administrative reasons.
No Facility Avl Tmp	The total number of sessions that failed to connect due to the temporary lack of required facilities (CDN result code of 4).
No Facility Avl Perm	The total number of sessions that failed to connect due to the permanent lack of required facilities (CDN result code of 5).
Invalid Destination	The total number of sessions that failed to connect due to the specification of an invalid destination (CDN result code of 6).
No Carrier Detected	The total number of sessions that failed to connect because no carrier signal was detected (CDN result code of 7).
Busy Signal	The total number of sessions that failed to connect due to the receipt of a busy signal (CDN result code of 8).
No Dial Tone	The total number of sessions that failed to connect because no dial tone was detected (CDN result code of 9).
LAC Timeout	The total number of sessions that failed to connect within the time allotted by the LAC service (CDN result code of 10).
No Approp Framing	The total number of sessions that failed to connect because no appropriate framing was detected (CDN result code of 11).

Field	Description
No Ctrl Conn	The total number of sessions that failed to connect because no control channel existed (StopCCN result code of 1).
Wrong Length	The total number of general errors that occurred because the length of the control channel was incorrect (Error code 2).
Out of Range	The total number of general errors that occurred because either one of the values of the field was out of range or the reserved field was non-zero (Error code 3).
Insufficient Resources	The total number of general errors that occurred because resources were not available to process the request (Error code 4).
Invalid SessID	The total number of general errors that occurred because of an invalid session identification (ID) number (Error code 5).
Vendor Specific Errors	The total number of general errors that occurred because vendor-specific errors occurred in the LAC (Error code 6).
Try Another LNS	The total number of general errors that occurred because the LNS indicated that the LAC service should attempt to establish the control channel with an alternate LNS (Error code 7).
Unknown AVP with M bit	The total number of general errors that occurred because a session or tunnel was disconnected due to the receipt of an unknown AVP with the M-bit set (Error code 8).
Misc Reasons	Unspecified reasons.
Rx Data Pkts	The total number of data packets received.
Tx Data Pkts	The total number of data packets transmitted.
Rx Data Octs	The total number of data octets received.
Tx Data Octs	The total number of data octets transmitted.
Rx Discard Data Pkts	The total number of data packets received and discarded.
Rx Control Pkts	The total number of control packets received.
Tx Control Pkts	The total number of control packets transmitted.
Rx Control Octs	The total number of control octets received.
Tx Control Octs	The total number of control octets transmitted.
Rx Control ZLB Pkts	The total number of zero-length body (ZLB) control packets received.
Tx Control ZLB Pkts	The total number of zero-length body (ZLB) control packets transmitted.
Rx HELLO Pkts	The total number of "Hello" packets received.
Tx HELLO Pkts	The total number of "Hello" packets transmitted.
Rx Dup Control Pkts	The total number of duplicate control packets received.
Control ACK Timeouts	The total number local timeouts which happen when we have not responded to the peer LNSs control packet. Typically, the system starts a timer when it receives a packet from the peer LNS. The system attempts to send the ACK message with a regular control message destined for the LNS. If the timer expires prior to the sending of the ACK message, the system sends a ZLB message which serves as an ACK.

Field	Description
Control Msg Retx Timeouts	The total number of timeouts that occurred after the retransmission timeout period expired when sending control messages.
Sessions Attempted	The total number of attempts made to connect sessions.
Sessions Connected	The total number of sessions successfully connected.
Sessions Failed	The total number of sessions that failed to connect.
Sessions Active	The total number of sessions currently connected.
Intra-PDSN Handoff Sessions	
Attempts	The total number of attempts to handoff subscriber sessions to another PDSN within this system.
Success	The total number of successful handoffs of subscriber sessions to another PDSN within this system.
Failures	The total number of failures when attempting to handoff subscriber sessions to another PDSN within this system.
Inter-PDSN Handoff Sessions	
Attempts	The total number of attempts were made by outside PDSNs to transfer a call to this PDSN.
Total tunnels matching specified criteria	The total number of tunnels currently facilitated by all LAC-services configured within the current context.

Chapter 115

show license info

Table 302.show license info Command Output Descriptions

Field	Description
Comment	Comment line for appropriate license key information
Device 1	Model and Serial number for device running license.
Device 2	Same as Device 1 or Unspecified
Issued	Date license issued
Expires	Date license expires
Issued by	License issuing authority
Key number	License key number
Enabled features	Lists applications enabled by the license
Session limits	Shows maximum number of sessions and the session type permitted by this license
Status	Shows the following: Device 1 status matchDevice 2 status matchLicense status: Valid; not valid (in grace period)Grace period end date

Chapter 116

show linecard

This chapter describes the outputs of the **show linecard** command.

show linecard table

Table 303. show linecard table Command Output Descriptions

Field	Description
Slot	Displays the chassis slot number and type. The slot type represents the type of card(s) that the slot supports. Possible slot types are: Ethernet 10/100, Ethernet 1000 line card, four-port Quad Gig-E (QGLC) line card (ASR 5000 only), and the 10 Gigabit Ethernet Line Card (XGLC) * Possible slot numbers are: 17 through 23, 26 through 39, and slots 42 through 48 *The XGLC is a full-length line card. It only fits in upper slots 17 through 23 and 26 through 32. Slots 24 and 25 would support the Switch Processor Input/Output (SPIO) card associated for the XGLC.
Card Type	Displays the type of card installed. The possible card types supported for this release are: Ethernet 10/100 Line Card, Ethernet 1000 Line Card (QGLC), 10 Gig Ethernet Line Card (XGLC), Switch Processor Input/Output Card.
# Ports	Displays the maximum number of physical ports supported per card. • The Ethernet 10/100 Line Card supports 8 ports. • The Ethernet 1000 Line Card supports 1 port. • The Quad Gig-E (QGLC) Line Card supports 4 ports • The 10 Gig Ethernet Line Card (XGLC) supports 1 port • The Switch Processor Input/Output Card supports 2 ports.
Oper State	Displays the operational state of the card. The possible operational states are: • Active: Indicates that the card is an active component that will be used to process subscriber data sessions. • Standby: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • Offline: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that it is not completely installed (i.e. the card interlock switch is not locked, refer to the <i>System Installation Guide</i> for information on installing cards in the system) or that its processes have been halted.
SPOF	Displays whether or not the component is a single point of failure (SPOF) in the system. If the component is an SPOF, then a Yes will appear in this column. If not, a No will be displayed.
Attach	Displays the PACs/PSC/PSC2s and SPCs/SMCs that the line cards are being associated with.

Chapter 117

show llc statistics

Table 304. show llc statistics Command Output Descriptions

Field	Description
LLC SAP Statistics	
Data transfer	
Data requests Rx	Number of LLC data requests received from the MS.
Data confirms Tx	Number of LLC data requests confirmation sent to the MS.
Data indications Tx	Number of LLC data indications sent to the MS.
Data-Sent indications Tx	Number of LLC data sent indications sent to the MS.
Unit data requests Rx	Number of LLC unit data requests received from the MS.
Unit data requests Rx Drop	Description: This proprietary counter indicates the total number of unit data requests received from SMDCP layer and dropped at the LLC layer. Triggers: Increments when LLC receives a downlink packet from SMDCP and the queue in LLC layer is full.
Unit data indications Tx	Number of LLC unit data indications sent to the MS.
Errors reported	
Discarded frames Rx	Number of LLC discarded frames received from the MS.
Discarded frames Tx	Number of LLC discarded frames sent to the MS.
Error frames Rx	Number of LLC error frames received from the MS.
Unrecognised frames Rx	Number of LLC unrecognized frames received from the MS.
XID collisions	Number of LLC exchange identifier (XID) request collisions.
Ciphering errors	Number of LLC ciphering errors.
FCS errors	Number of LLC frame check sequence errors.
LLC Frame statistics	
Octets Rx	Number of bytes of LLC frames received from an MS.
Octets Tx	Number of bytes sent from the LLC layer to an MS from the SGSN.

Field	Description
Unack frames Rx	Number of unacknowledged UI frames received at the LLC layer from an MS.
Unack frames Tx	Number of unacknowledged UI frames sent from the LLC to an MS.
UI Rx	Number of LLC frames with unnumbered information received from the MS.
UI Tx	Number of LLC frames with unnumbered information sent to the MS.
UI Ciphered frames Rx	Number of LLC frames with ciphered unnumbered information received from the MS.
UI Ciphered frames Tx	Number of LLC frames with ciphered unnumbered information sent to the MS.
XID Rx	Number of XID-reset messages received from the MS.
XID Tx	Number of XID-reset messages sent to the MS.

Chapter 118

show lma-service

This chapter describes the outputs of the `show lma-service` command.

show lma-service statistics

Table 305. show lma-service statistics Command Output Descriptions

Field	Description
MIP AAA Authentication	
Attempts	The total number of MIP AAA authentication attempts made by this system or the specified service.
Success	The total number of MIP AAA authentication attempts that were successful made by this system or the specified service.
Total Failures	The total number of MIP AAA authentication attempts that failed made by this system or the specified service.
Actual Auth Failures	The total number of actual MIP AAA authentication failures received by this system or the specified service.
Failures	The total number of failures received by this system or the specified service.
Misc Auth Failures	The total number of miscellaneous MIP AAA authentication failures received this system or the specified service.
Binding Updates Received	
Total Received	The total number of all binding updates received by this system or the specified service.
Total Accepted	The total number of all binding updates received and accepted by this system or the specified service.
Total Denied	The total number of all binding updates received and denied by this system or the specified service.
Total Discarded	The total number of all binding updates received and discarded by this
Initial Binding Update Requests	
Received	The total number of all initial binding updates received by this system or the specified service.
Accepted	The total number of initial binding updates received and accepted by this system or the specified service.
Denied	The total number of initial binding updates received and denied by this system or the specified service.
Refresh Binding Update Requests	
Received	The total number of all refresh binding updates received by this system or the specified service.
Accepted	The total number of refresh binding update requests received and accepted by this system or the specified service.
Denied	The total number of refresh binding update requests received and denied by this system or the specified service.
DeReg Requests	
Received	The total number of all deregistration request binding updates received by this system or the specified service.

Field	Description
Accepted	The total number of deregistration request binding updates received and accepted by this system or the specified service.
Denied	The total number of deregistration request binding updates received and denied by this system or the specified service.
Handoff Requests	
Received	The total number of all handoff request binding updates received by this system or the specified service.
Accepted	The total number of handoff request binding updates received and accepted by this system or the specified service.
Denied	The total number of handoff request binding updates received and denied by this system or the specified service.
Binding Acknowledgements Sent	
Total	The total number of all binding update acknowledgements sent by this system or the specified service.
Accepted Reg	The total number of accepted registration binding update acknowledgements sent by this system or the specified service.
Accepted DeReg	The total number of accepted deregistration binding update acknowledgements sent by this system or the specified service.
Denied	The total number of denied binding update acknowledgements sent by this system or the specified service.
Send Error	The total number of send error binding update acknowledgements sent by this system or the specified service.
Binding Update Deny Reasons	
Insufficient Resources	The total number of binding update deny messages, due to insufficient resources, sent by this system or the specified service.
Mismatched ID	The total number of binding update deny messages, due to mismatched IDs, sent by this system or the specified service.
MN Auth Failure	The total number of binding update deny messages, due to a mobile node authentication failure condition, sent by this system or the specified service.
Admin Prohibited	The total number of binding update deny messages, due to requiring a message ID, sent by this system or the specified service.
Msg ID Required	The total number of binding update deny messages, due to requiring a message ID, sent by this system or the specified service.
DAD Failed	The total number of binding update deny messages, due to DAD failure, sent by this system or the specified service.
Not Home Subnet	The total number of binding update deny messages, due to an incorrect home subnet, sent by this system or the specified service.
Sequence Out Of Window	The total number of binding update deny messages, due to sequence out of window, sent by this system or the specified service.

Field	Description
Reg Type Change Disallowed	The total number of binding update deny messages, due to a disallowed registration type change, sent by this system or the specified service.
Unspecified Reason	The total number of binding update deny messages, due to an unspecified reason, sent by this system or the specified service.
Service-Authorization Failed	The total number of binding update deny messages, due to a service authorization failure, sent by this system or the specified service.
Proxy Reg Not Enabled	The total number of binding update deny messages, due to a proxy registration not enabled error, sent by this system or the specified service.
Timestamp Mismatch	The total number of binding update deny messages, due to a timestamp mismatch error, sent by this system or the specified service.
Timestamp Lower Than Expected	The total number of binding update deny messages, due to a timestamp lower than expected reason, sent by this system or the specified service.
Missing MN-ID Option	The total number of binding update deny messages, due to a missing MN-ID option, sent by this system or the specified service.
Missing HNP Option	The total number of binding update deny messages, due to a missing HNP option, sent by this system or the specified service.
Missing Access Tech Option	The total number of binding update deny messages, due to a missing access technology option, sent by this system or the specified service.
Missing Handoff Ind Option	The total number of binding update deny messages, due to a missing handoff indicator option, sent by this system or the specified service.
Not Authorized For HNP	The total number of binding update deny messages, due to a not authorized for HNP reason, sent by this system or the specified service.
Not LMA For Mobile	The total number of binding update deny messages, due to a missing LMA for the MN reason, sent by this system or the specified service.
Not Authorized For Proxy Reg	The total number of binding update deny messages, due to a not authorized for proxy registration reason, sent by this system or the specified service.
BCE Prefix Do Not Match	The total number of binding update deny messages, due to a BCE prefix not matching, sent by this system or the specified service.
GRE Key Option Required	The total number of binding update deny messages, due to a GRE key option required reason, sent by this system or the specified service.
MCOA Unknown CoA:	The total number of binding update deny messages, due to a MCOA unknown CoA reason, sent by this system or the specified service.
Update Denied - Insufficient Resource Reasons	
No Session Manager	The total number of binding update deny messages, due to insufficient resources - no session manager, sent by this system or the specified service.
No Memory	The total number of binding update deny messages, due to insufficient resources - no memory, sent by this system or the specified service.
Session Manager Rejected	The total number of binding update deny messages, due to insufficient resources - session manager rejected, sent by this system or the specified service.

Field	Description
Input-Q Exceeded	The total number of binding update deny messages, due to insufficient resources - input queue exceeded, sent by this system or the specified service.
Simul Bindings Exceeded	The total number of binding update deny messages, due to insufficient resources - simultaneous bindings exceeded, sent by this system or the specified service.
Address Alloc Failed	The total number of binding update deny messages, due to insufficient resources - address allocation failed, sent by this system or the specified service.
Update Denied - Admin Prohibited Reasons	
MN-AAA Auth Option Missing	The total number of binding update deny messages, due to an administrator prohibited - MN-AAA auth option missing condition, sent by this system or the specified service.
H-bit Not Set	The total number of binding update deny messages, due to an administrator prohibited - H-bit not set condition, sent by this system or the specified service.
Invalid MN-AAA Option SPI	The total number of binding update deny messages, due to an administrator prohibited - invalid MN-AAA option SPI condition, sent by this system or the specified service.
Invalid MN-HA Option SPI	The total number of binding update deny messages, due to an administrator prohibited - invalid MN-HA option SPI condition, sent by this system or the specified service.
Congestion Control Denied	The total number of binding update deny messages, due to an administrator prohibited - congestion control denied condition, sent by this system or the specified service.
Policy Rejected	The total number of binding update deny messages, due to an administrator prohibited - policy rejected condition, sent by this system or the specified service.
HoA Not Authorized	The total number of binding update deny messages, due to an administrator prohibited - HoA not authorized condition, sent by this system or the specified service.
No Permission	The total number of binding update deny messages, due to an administrator prohibited - no permission condition, sent by this system or the specified service.
Bad Request	The total number of binding update deny messages, due to an administrator prohibited - bad request condition, sent by this system or the specified service.
Binding Updates Discard Reasons	
Congestion Discarded	The total number of binding update discarded messages, due to congestion, sent by this system or the specified service.
Checksum Error	The total number of binding update discarded messages, due to checksum error(s), sent by this system or the specified service.
Initial Auth Pending	The total number of binding update discarded messages, due to an initial authentication pending condition, sent by this system or the specified service.
Session Not Found	The total number of binding update discarded messages, due to a session not found condition, sent by this system or the specified service.
HAMGR Not Ready	The total number of binding update discarded messages, due to an HA manager not found condition, sent by this system or the specified service.
Decode Failure	The total number of binding update discarded messages, due to a decode failure, sent by this system or the specified service.
Invalid Buffer Length	The total number of binding update discarded messages, due to an invalid buffer length, sent by this system or the specified service.

Field	Description
Revocation Pending	The total number of binding update discarded messages, due to pending revocations, sent by this system or the specified service.
Binding Revocation	
Sent	The total number of binding revocations sent by this system or the specified service.
Retries Sent	The total number of binding revocation retries sent by this system or the specified service.
Ack Rcvd	The total number of binding revocation acknowledgements received by this system or the specified service.
Not Acknowledged	The total number of binding revocations sent, but not acknowledged, by this system or the specified service.
Rcvd	The total number of binding revocations received by this system or the specified service.
Ack Sent	The total number of binding revocation acknowledgements sent by this system or the specified service.
Sent Revocation Trigger Reasons	
Unspecified	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with an “Unspecified” revocation trigger reason.
Administrative Reason	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with an “Administrative Reason” revocation trigger reason.
Inter-MAG Handoff-Same ATT	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with an “Inter-MAG Handoff-Same ATT” revocation trigger reason.
Inter-MAG - Unknown Handoff	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with an “Inter-MAG - Unknown Handoff” revocation trigger reason.
Inter-MAG Handoff-Diff ATT	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with an “Inter-MAG Handoff-Diff ATT” revocation trigger reason.
Per-Peer Policy	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with a “Per-Peer Policy” revocation trigger reason.
Revoking Node Local Policy	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with a “Revoking Node Local Policy” revocation trigger reason.
User Initiated Session Term	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with a “User Initiated Session Term” revocation trigger reason.
Access Network Session Term	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with an “Access Network Session Term” revocation trigger reason.
Out-of-Sync BCE State	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with an “Out-of-Sync BCE State” revocation trigger reason.
Unknown	The total number of Binding Revocation Indication (BRI) messages sent by the LMA with an “Unknown” revocation trigger reason.
Received Revocation ACK Status	
Success	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a “Success” status.

Field	Description
Partial-Success	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a "Partial-Success" status.
Binding-Does-Not-Exist	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a "Binding-Does-Not-Exist" status.
No IPv4-HoA-Bind	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a "No IPv4-HoA-Bind" status.
Global-Revoc-Not-Authorized	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a "Global-Revoc-Not-Authorized" status.
Revoc-MN-ID-Required	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a "Revoc-MN-ID-Required" status.
Revoc-Failed-MN-Attached	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a "Revoc-Failed-MN-Attached" status.
Trigger-Not-Supported	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a "Trigger-Not-Supported" status.
Proxy-Bind-Rev-Not-Supported	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a "Proxy-Bind-Rev-Not-Supported" status.
Revoc-Func-Not-Supported	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with a "Revoc-Func-Not-Supported" status.
Unknown	The total number of Binding Revocation Acknowledgement (BRA) messages received by the LMA with an "Unknown" status.
Binding Revocation ACK Discarded	
Total	The total number of binding revocation acknowledgements received and discarded by this system or the specified service.
Session Not Found	The total number of binding revocation acknowledgements received and discarded, due to a session not found condition, by this system or the specified service.
Badly Formed Request	The total number of binding revocation acknowledgements received and discarded, due to a badly formed request condition, by this system or the specified service.
Decode Error	The total number of binding revocation acknowledgements received and discarded, due to a decode error condition, by this system or the specified service.
Checksum Error	The total number of binding revocation acknowledgements received and discarded, due to a checksum error condition, by this system or the specified service.
Invalid Message Type	The total number of binding revocation acknowledgements received and discarded, due to a invalid memory type condition, by this system or the specified service.
HAMGR Not Ready	The total number of binding revocation acknowledgements received and discarded, due to a HAMGR not ready condition, by this system or the specified service.
Matching Request Not Found	The total number of binding revocation acknowledgements received and discarded, due to a matching request not found condition, by this system or the specified service.
Invalid Buffer Length	The total number of binding revocation acknowledgements received and discarded, due to a invalid buffer length condition, by this system or the specified service.
Tunnel Data Received	

Field	Description
Total Packets	The total number of tunnel packets received by this system or the specified service.
6in6	The total number of IPv6-in-IPv6 tunnel packets received by this system or the specified service.
4in6	The total number of IPv4-in-IPv6 tunnel packets received by this system or the specified service.
IPv6 GRE (IPv4)	The total number of IPv4-in-IPv6 GRE tunnel packets received by this system or the specified service.
IPv6 GRE (IPv6)	The total number of IPv6-in-IPv6 GRE tunnel packets received by this system or the specified service.
4in4	The total number of IPv4-in-IPv4 tunnel packets received by this system or the specified service.
6in4	The total number of IPv6-in-IPv4 tunnel packets received by this system or the specified service.
IPv4 UDP (IPv4)	The total number of IPv4-in-IPv4 UDP tunnel packets received by this system or the specified service.
IPv4 UDP (IPv6)	The total number of IPv6-in-IPv4 UDP tunnel packets received by this system or the specified service.
Total Bytes	The total number of tunnel bytes received by this system or the specified service.
6in6	The total number of IPv6-in-IPv6 tunnel bytes received by this system or the specified service.
4in6	The total number of IPv4-in-IPv6 tunnel bytes received by this system or the specified service.
IPv6 GRE (IPv4)	The total number of IPv4-in-IPv6 GRE tunnel bytes received by this system or the specified service.
IPv6 GRE (IPv6)	The total number of IPv6-in-IPv6 GRE tunnel bytes received by this system or the specified service.
4in4	The total number of IPv4-in-IPv4 tunnel bytes received by this system or the specified service.
6in4	The total number of IPv6-in-IPv4 tunnel bytes received by this system or the specified service.
IPv4 UDP (IPv4)	The total number of IPv4-in-IPv4 UDP tunnel bytes received by this system or the specified service.
IPv4 UDP (IPv6)	The total number of IPv6-in-IPv4 UDP tunnel bytes received by this system or the specified service.
Errors	
Protocol Type Error	The total number of protocol type data errors received by this system or the specified service.
Invalid Pkt Length	The total number of invalid packet length data errors received by this system or the specified service.
No Session Found	The total number of no session found data errors received by this system or the specified service.
Tunnel Data Sent	
Total Packets	The total number of tunnel packets sent by this system or the specified service.
6in6	The total number of IPv6-in-IPv6 tunnel packets sent by this system or the specified service.
4in6	The total number of IPv4-in-IPv6 tunnel packets sent by this system or the specified service.
IPv6 GRE (IPv4)	The total number of IPv4-in-IPv6 GRE tunnel packets sent by this system or the specified service.
IPv6 GRE (IPv6)	The total number of IPv6-in-IPv6 GRE tunnel packets sent by this system or the specified service.
4in4	The total number of IPv4-in-IPv4 tunnel packets sent by this system or the specified service.
6in4	The total number of IPv6-in-IPv4 tunnel packets sent by this system or the specified service.
IPv4 UDP (IPv4)	The total number of IPv4-in-IPv4 UDP tunnel packets sent by this system or the specified service.
IPv4 UDP (IPv6)	The total number of IPv6-in-IPv4 UDP tunnel packets sent by this system or the specified service.

Field	Description
Total Bytes	The total number of tunnel bytes sent by this system or the specified service.
6in6	The total number of IPv6-in-IPv6 tunnel bytes sent by this system or the specified service.
4in6	The total number of IPv4-in-IPv6 tunnel bytes sent by this system or the specified service.
IPv6 GRE (IPv4)	The total number of IPv4-in-IPv6 GRE tunnel bytes sent by this system or the specified service.
IPv6 GRE (IPv6)	The total number of IPv6-in-IPv6 GRE tunnel bytes sent by this system or the specified service.
4in4	The total number of IPv4-in-IPv4 tunnel bytes sent by this system or the specified service.
6in4	The total number of IPv6-in-IPv4 tunnel bytes sent by this system or the specified service.
IPv4 UDP (IPv4)	The total number of IPv4-in-IPv4 UDP tunnel bytes sent by this system or the specified service.
IPv4 UDP (IPv6)	The total number of IPv6-in-IPv4 UDP tunnel bytes sent by this system or the specified service.
Tunnel ICMPV6 Packets	
Packet Too Big Rcvd	The total number of tunnel ICMP packets - too big received by this system or the specified service.
Packet Too Big Dropped	The total number of tunnel ICMP packets - too big dropped by this system or the specified service.
Packet Too Big Relayed	The total number of tunnel ICMP packets - too big relayed by this system or the specified service.
Total Disconnects	
Lifetime expiry	The total number of disconnects due to lifetime expiry initiated by this system or the specified service.
Deregistrations	The total number of disconnects due to deregistrations initiated by this system or the specified service.
Admin Drops	The total number of disconnects due to admin drops initiated by this system or the specified service.
Other Reasons	The total number of disconnects due to “other reasons” initiated by this system or the specified service.

Chapter 119

show local-user

This chapter describes the outputs of the `show local-user` command.

show local-user username name verbose

Table 306. show local-user username name verbose Command Output Descriptions

Field	Description
Username	The name of the local-user.
Auth Level	The authentication level for the local-user as one of the following: • secadmin • admin • operator • inspector
Last Login	The time and date that the user last logged in.
Login Failures:	The number of login failures that occurred for the user.
Password Expired:	Indicates whether or not the password has expired.
Locked:	Indicates whether or not the account is locked.
Suspended	Indicates whether or not the account is suspended.
Lockout on Pw Aging	Indicates whether or not the account can be locked out due to the age of the password.
Lockout on Login Fail	Indicates whether or not the account can be locked out due to login failures.

show local-user statistics verbose

Table 307. show local-user statistics verbose Command Output Descriptions

Field	Description
Number of login attempts	The total number of login attempts for all local-user accounts.
Number of login success	The total number of successful logins for all local-user accounts.
Number of login failures	The total number of failed logins for all local-user accounts.
Bad username	The total number of logins that failed due to invalid usernames.
Bad password	The total number of logins that failed due to incorrect passwords.
Locked user	The total number of logins that failed due to the account being locked.
Suspended user	The total number of logins that failed due to the account being suspended.
Internal error	The total number of logins that failed due to system internal errors.
Number of user lockouts	The total number of local-user accounts currently in the locked-out state.
Internal errors	The total number of internal errors that occurred.
Unable to accept request	The total number of internal errors that occurred because the system could not accept a login request.
Unable to receive request	The total number of internal errors that occurred because the system could not receive a login request.
Unable to sent response	The total number of internal errors that occurred because the system could not send a response to a login request.
Last login attempt	The time and date of the last login attempt by a local-user administrative user.
Last login success	The time and date of the last successful login by a local-user administrative user.
Last login failure	The time and date of the last failed login by a local-user administrative user.
Last statistics reset	The last time and date that local-user statistics maintained by the system were cleared.

Chapter 120

show mag-service

This chapter includes the **show mag-service** command output tables.

show mag-service statistics

Table 308. show mag-service statistics Command Output Descriptions

Field	Description
Binding Update Sent	
Total	The total number of all binding updates sent by this system or the specified service.
Init Request Xmit	The total number of initial request transmit binding updates sent by this system or the specified service.
Init Request Re-Xmit	The total number of initial request retransmit binding updates sent by this system or the specified service.
Renew Request Xmit	The total number of renew request transmit binding updates sent by this system or the specified service.
Renew Request Re-Xmit	The total number of renew request retransmit binding updates sent by this system or the specified service.
Dereg Request Xmit	The total number of deregistration request transmit binding updates sent by this system or the specified service.
Dereg Request Re-Xmit	The total number of deregistration request retransmit binding updates sent by this system or the specified service.
Binding Acknowledgement Rcvd	
Total	The total number of all binding acknowledgements received by this system or the specified service.
Errors	The total number of all binding acknowledgements, with errors, received by this system or the specified service.
Accepted	The total number of all binding acknowledgements received, and accepted by this system or the specified service.
Denied	The total number of all binding acknowledgements received, but denied by this system or the specified service.
Init Reply Rcvd	The total number of all binding acknowledgements - initial reply received by this system or the specified service.
Renew Reply Rcvd	The total number of all binding acknowledgements - renew reply received by this system or the specified service.
Dereg Reply Rcvd	The total number of all binding acknowledgements - deregistration reply received by this system or the specified service.
Denied by LMA	
Insufficient Resources	The total number of binding updates sent by this system or the specified service but denied by the LMA due to insufficient resources.
Mismatched ID	The total number of binding updates sent by this system or the specified service but denied by the LMA due to mismatched IDs.

Field	Description
MN Auth Failure	The total number of binding updates sent by this system or the specified service but denied by the LMA due to mobile node authorization failures.
Admin Prohibited	The total number of binding updates sent by this system or the specified service but denied by the LMA due to admin prohibited conditions.
Msg ID Required	The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing message IDs.
DAD Failed	The total number of binding updates sent by this system or the specified service but denied by the LMA due to DAD failures.
Not Home Subnet	The total number of binding updates sent by this system or the specified service but denied by the LMA due to incorrect home subnet.
Sequence Out Of Window	The total number of binding updates sent by this system or the specified service but denied by the LMA due to sequence out of window conditions.
Reg Type Change Disallowed	The total number of binding updates sent by this system or the specified service but denied by the LMA due to registration type change disallowed.
Unspecified Reason	The total number of binding updates sent by this system or the specified service but denied by the LMA due to unspecified reasons.
Service-Authorization Failed	The total number of binding updates sent by this system or the specified service but denied by the LMA due to failed service authorizations.
Proxy Reg Not Enabled	The total number of binding updates sent by this system or the specified service but denied by the LMA due to proxy registration not being enabled.
Timestamp Mismatch	The total number of binding updates sent by this system or the specified service but denied by the LMA due to timestamp mismatches.
Timestamp Lower Than Expected	The total number of binding updates sent by this system or the specified service but denied by the LMA due to lower than expected timestamps.
Missing MN-ID Option	The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing mobile node ID options.
Missing HNP Option	The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing HNP options.
Missing Access Tech Option	The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing access technology options.
Missing Handoff Ind Option	The total number of binding updates sent by this system or the specified service but denied by the LMA due to missing handoff indication options.
Not Authorized For HNP	The total number of binding updates sent by this system or the specified service but denied by the LMA due to not being authorized for HNP.
Not LMA For Mobile	The total number of binding updates sent by this system or the specified service but denied by the LMA due incorrect LMA for mobility.
Not Authorized For Proxy Reg	The total number of binding updates sent by this system or the specified service but denied by the LMA due to not being authorized for proxy registration.
BCE Prefix Do Not Match	The total number of binding updates sent by this system or the specified service but denied by the LMA due to BCE prefix mismatches.

Field	Description
Binding Acknowledgement Error Reason	
Missing HNP	The total number of binding acknowledgements with missing HNP errors received by this system or the specified service.
Missing NAI	The total number of binding acknowledgements with missing NAI errors received by this system or the specified service.
Home Address Conflict	The total number of binding acknowledgements with home address conflict errors received by this system or the specified service.
Matching Request Not Found	The total number of binding acknowledgements with matching requests not found errors received by this system or the specified service.
Badly Formed	The total number of binding acknowledgements with badly formed message errors received by this system or the specified service.
Checksum Error	The total number of binding acknowledgements with checksum errors received by this system or the specified service.
Session Not Found	The total number of binding acknowledgements with session not found errors received by this system or the specified service.
Binding Revocation	
Sent	The total number of binding revocations sent by this system or the specified service.
Retries Sent	The total number of binding revocation retries sent by this system or the specified service.
Ack Rcvd	The total number of binding revocation acknowledgements received by this system or the specified service.
Not Acknowledged	The total number of binding revocations sent, but not acknowledged, by this system or the specified service.
Rcvd	The total number of binding revocations received by this system or the specified service.
Ack Sent	The total number of binding revocation acknowledgements sent by this system or the specified service.
Received Binding Revocation Trigger Reasons	
Unspecified	The total number of Binding Revocation Indication (BRI) messages received by the MAG with an "Unspecified" revocation trigger reason.
Administrative Reason	The total number of Binding Revocation Indication (BRI) messages received by the MAG with an "Administrative Reason" revocation trigger reason.
Inter-MAG Handoff-Same ATT	The total number of Binding Revocation Indication (BRI) messages received by the MAG with an "Inter-MAG Handoff-Same ATT" revocation trigger reason.
Inter-MAG - Unknown Handoff	The total number of Binding Revocation Indication (BRI) messages received by the MAG with an "Inter-MAG - Unknown Handoff" revocation trigger reason.
Inter-MAG Handoff-Diff ATT	The total number of Binding Revocation Indication (BRI) messages received by the MAG with an "Inter-MAG Handoff-Diff ATT" revocation trigger reason.
Per-Peer Policy	The total number of Binding Revocation Indication (BRI) messages received by the MAG with a "Per-Peer Policy" revocation trigger reason.

Field	Description
Revoking Node Local Policy	The total number of Binding Revocation Indication (BRI) messages received by the MAG with a "Revoking Node Local Policy" revocation trigger reason.
User Initiated Session Term	The total number of Binding Revocation Indication (BRI) messages received by the MAG with a "User Initiated Session Term" revocation trigger reason.
Access Network Session Term	The total number of Binding Revocation Indication (BRI) messages received by the MAG with an "Access Network Session Term" revocation trigger reason.
Out-of-Sync BCE State	The total number of Binding Revocation Indication (BRI) messages received by the MAG with an "Out-of-Sync BCE State" revocation trigger reason.
Unknown	The total number of Binding Revocation Indication (BRI) messages received by the MAG with an "Unknown" revocation trigger reason.
Sent Revocation ACK Status	
Success	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "Success" status.
Partial-Success	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "Partial-Success" status.
Binding-Does-Not-Exist	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "Binding-Does-Not-Exist" status.
No IPv4-HoA-Bind	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "No IPv4-HoA-Bind" status.
Global-Revoc-Not-Authorized	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "Global-Revoc-Not-Authorized" status.
Revoc-MN-ID-Required	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "Revoc-MN-ID-Required" status.
Revoc-Failed-MN-Attached	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "Revoc-Failed-MN-Attached" status.
Trigger-Not-Supported	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "Trigger-Not-Supported" status.
Proxy-Bind-Rev-Not-Supported	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "Proxy-Bind-Rev-Not-Supported" status.
Revoc-Func-Not-Supported	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with a "Revoc-Func-Not-Supported" status.
Unknown	The total number of Binding Revocation Acknowledgement (BRA) messages sent by the MAG with an "Unknown" status.
Binding Revocation Indication Discarded	
Total	The total number of binding revocation acknowledgements received and discarded by this system or the specified service.
Session Not Found	The total number of binding revocation acknowledgements received and discarded, due to a session not found condition, by this system or the specified service.
Badly Formed Request	The total number of binding revocation acknowledgements received and discarded, due to a badly formed request condition, by this system or the specified service.

Field	Description
Decode Error	The total number of binding revocation acknowledgements received and discarded, due to a decode error condition, by this system or the specified service.
Checksum Error	The total number of binding revocation acknowledgements received and discarded, due to a checksum error condition, by this system or the specified service.
Invalid Message Type	The total number of binding revocation acknowledgements received and discarded, due to an invalid message type condition, by this system or the specified service.
No Memory	The total number of binding revocation acknowledgements received and discarded, due to insufficient memory, by this system or the specified service.
Tunnel Data Received	
Total Packets	The total number of tunnel packets received by this system or the specified service.
6in6 4in6 IPv6 GRE (IPv4) IPv6 GRE (IPv6)	The total number of IPv6-in-IPv6 tunnel packets received by this system or the specified service. The total number of IPv4-in-IPv6 tunnel packets received by this system or the specified service. The total number of IPv4-in-IPv6 GRE tunnel packets received by this system or the specified service. The total number of IPv6-in-IPv6 GRE tunnel packets received by this system or the specified service.
Total Bytes	The total number of tunnel bytes received by this system or the specified service.
6in6 4in6 IPv6 GRE (IPv4) IPv6 GRE (IPv6)	The total number of IPv6-in-IPv6 tunnel bytes received by this system or the specified service. The total number of IPv4-in-IPv6 tunnel bytes received by this system or the specified service. The total number of IPv4-in-IPv6 GRE tunnel bytes received by this system or the specified service. The total number of IPv6-in-IPv6 GRE tunnel bytes received by this system or the specified service.
Errors	
Protocol Type Error	The total number of protocol type data errors received by this system or the specified service.
Invalid Pkt Length	The total number of invalid packet length data errors received by this system or the specified service.
No Session Found	The total number of no session found data errors received by this system or the specified service.
Tunnel Data Sent	
Total Packets	The total number of tunnel packets sent by this system or the specified service.
6in6 4in6 IPv6 GRE (IPv4) IPv6 GRE (IPv6)	The total number of IPv6-in-IPv6 tunnel packets sent by this system or the specified service. The total number of IPv4-in-IPv6 tunnel packets sent by this system or the specified service. The total number of IPv4-in-IPv6 GRE tunnel packets sent by this system or the specified service. The total number of IPv6-in-IPv6 GRE tunnel packets sent by this system or the specified service.
Total Bytes	The total number of tunnel bytes sent by this system or the specified service.
6in6 4in6 IPv6 GRE (IPv4) IPv6 GRE (IPv6)	The total number of IPv6-in-IPv6 tunnel bytes sent by this system or the specified service. The total number of IPv4-in-IPv6 tunnel bytes sent by this system or the specified service. The total number of IPv4-in-IPv6 GRE tunnel bytes sent by this system or the specified service. The total number of IPv6-in-IPv6 GRE tunnel bytes sent by this system or the specified service.
Total Disconnects/Failures	
Lifetime expiry	The total number of disconnects due to lifetime expiry initiated by this system or the specified service.
Access Initiated Term	The total number of disconnects due to deregistrations initiated by this system or the specified service.

Field	Description
Admin Drops	The total number of disconnects due to admin drops initiated by this system or the specified service.
Other Reasons	The total number of disconnects due to “other reasons” initiated by this system or the specified service.
LMA Revocations	The total number of disconnects due to LMA revocations received by this system or the specified service.

Chapter 121

show mbms bearer-service

This chapter includes the `show mbms bearer-service` command output tables.

show mbms bearer-service full all

Table 309. show mbms bearer-service full all Command Output Descriptions

Field	Description
MBMS Bearer Context ID	Specifies the identifier for bearer context used for MBMs service.
State	Specifies the state of bearer service instance.
Mcast Address	Specifies the IP address of BM-SC (Broadcast Multicast - Service Center) server bind to this instance.
APN	Specifies the name if the APN bind to this bearer instance.
Session Identity	Indicates the identifier for MBMS session active on system.
TMGI	indicates the globally unique Temporary Mobile Group Identity (TMGI) allocated by the BM-SC (Broadcast Multicast - Service Center) per MBMS bearer service.
MBMS Bearer Capabilities	Displays the value to indicate MBMS bearer capabilities in Activate MBMS Context Request message.
Service Area Length	Specifies the length of character string configured to indicate MBMS service area. Service area is the area within which data of a specific MBMS session are sent. Each individual MBMS session of an MBMS Bearer Service may be sent to a different MBMS Service Area.
MBMS 2G/3G indication	Displays the value to indicate type of service networks 2G GPRS network or 3G UMTS in Activate MBMS Context Request message.
Counting Info	Displays the value to indicate counting information for message broadcast in MBMS service area.
Session Repetition Number	Indicates the number of times the MBMS session retransmitted the broadcast message.
MBMS-Session-Identity	Specifies the MBMs session identifier.
MBMS-BMSC-SSM-IP	Indicates the IP address configured in IPv4 format with MBMS service and BM-SC server for interface.
Service Type	Specifies the type of service active for this instance of bearer service. Possible values are: UnicastMulticast
Session Started	Indicates whether MBMs service started or not.
BMSC supported user mode	Indicates the supported user mode on BM-SC for this instance of session. It can be Unicast (Broadcast) and/or Multicast.
GGSN selected user mode	Indicates the user mode selected by GGSN for this instance of session. It can be Ucast (Unicast) and/or Mcast (Multicast).
Time to Xfer	Indicates the time taken to transfer the message from system to UE.
Session Duration	Indicates the time elapsed after MBMS session started.
Num MBMS UEs	Indicates total number of UEs connected for this session.

Field	Description
Num MBMS Bearer	Indicates total number of MBMS bearer session instances active for this session.
Quality Of Service	Indicates the configured or updated QoS parameters for this bearer instance.
Traffic Classl	Specifies the class of traffic of active MBMS session. Possible values are: ConversationalStreaming
Maximum Bit Rate Uplink	Indicates the MBR supported/configured for data flow in uplink (to PDN) direction.
Maximum Bit Rate Downlink	Indicates the MBR supported/configured for data flow in downlink (from PDN) direction.
Guaranteed Bit Rate Uplink	Indicates the GBR supported/configured for data flow in uplink (to PDN) direction.
Guaranteed Bit Rate Downlink	Indicates the GBR supported/configured for data flow in downlink (from PDN) direction.
Total Number of MBMS Bearer Services	Indicates the total number of MBMS bearer instances are active.

Chapter 122

show mipfa

This chapter includes the **show mipfa** command output tables.

show mipfa full username

Table 310. show mipfa full username Command Output Descriptions

Field	Description
Username	The subscriber's username.
Callid	The subscriber's call identification number (callid).
MSID	The subscriber's Mobile Station Identification number (MSID).
Num Agent Advt Sent	The total number of agent advertisement messages sent by the FA to the subscriber's mobile node.
Num Agent Solicit Rcvd	The total number of agent solicitation messages received by the FA from the subscriber's mobile node.
Home Address	The IP address assigned to the subscriber's mobile node for the duration of the session.
NAI	The subscriber's Network Access Identifier (NAI).
FA Address	The IP address of the FA that is facilitating the subscriber's Mobile IP session.
HA Address	The IP address of the Home Agent that is facilitating the subscriber's Mobile IP session.
Lifetime	The accepted lifetime interval for this session.
Remaining Lifetime	The amount of time that remains after which the session expires and is torn down.
Reverse Tunneling	Displays whether or not reverse tunneling is implemented for the subscriber's session.
Encapsulation Type	The encapsulation method used for the subscriber's session.
GRE Key	The key that uniquely identifies the subscriber session when the Generic Routing Encapsulation (GRE) protocol Encapsulation Type
IPSec Required	Indicates whether or not IPSec is required for the subscriber Mobile IP session.
IPSec Ctrl Tunnel Estab.	If IPSec is required for the session, this field indicates whether or not the control tunnel has been established.
IPSec Data Tunnel Estab.	If IPSec is required for the session, this field indicates whether or not the data tunnel has been established.
MN-AAA Removal	Shows if mn-aaa-removal-indication is enable or disabled. The possible values are: • enabled • disabled
Proxy MIP	Shows if Proxy Mobile IP is enabled or disabled for this subscriber session. Possible values are: • enabled • disabled
DMU Auth Failures	The total number of failed Dynamic MIP Key Update authentications for this subscriber session.

Field	Description
Send Terminal Verification	Shows if the FA is enabled to send the terminal verification NVSE in the RRQ. for this subscriber session. Possible values are: - enabled - disabled
Revocation Negotiated	Indicates whether or not MIP Registration Revocation was negotiated between the FA and the HA for this subscriber session. Possible values are : - NO - YES
Revocation I Bit Negotiated	Indicates whether or not the Revocation I bit was negotiated. Possible values are : - NO - YES
MN-HA-SPI Present	Status of dynamic MN-HA-SPI received from AAA in RRP for this subscriber session.
MN-HA-SPI	Specifies the dynamic MN-HA Security Parameter Index (SPI) number received from AAA in RRP for this subscriber session.
FA-HA-SPI Present	Status of dynamic FA-HA-SPI received from AAA in RRP for this subscriber session.
FA-HA-SPI	Specifies the dynamic FA-HA Security Parameter Index (SPI) number received from AAA in RRP for this subscriber session.
FA-HA-Key-Present	The security parameter index (SPI) key used to verify a trusted host environment and that communications are to be established between known hosts. Checks for presence of the FA - HA key. Options are: - True - False
FA-HA-SPI	FA - HA security parameter index (SPI)
HA-RK-Key-Present	The HA root key (RK) received by the HA from the AAA in the Radius Access-Accept. Checks for presence of HA-RK key. Options are: - True - False Note: True indicates a WiMAX session.
HA-RK-SPI	HA - RK security parameter index (SPI) Note: This field applies to WiMAX sessions only.
HA-RK-Lifetime	The total lifetime applied to an HA-RK. Note: This field applies to WiMAX sessions only.
HA-RK-Remaining-Lifetime	The total remaining lifetime for the HA-RK. Note: This field applies to WiMAX sessions only.

show mipfa peers fa-service

Table 311.show mipfa peers fa-service Command Output Descriptions

Field	Description
Context	The name of the context where the FA service is located.
FA Service	The name of the FA service.
Peer Address	The IP address of the peer.
Current Sessions	The number of sessions currently running on the peer.
Total Sessions	The total number of current and past sessions for the peer.
IP Security	Specifies if IP security is enabled or disabled on the peer.
FA-HA Authentication	Specifies if FA-HA authentication is enabled or disabled on the peer.
HA Monitor Status	Specifies if HA monitor is enabled or disabled on the peer.
Total Peers	The total number of peers in the output of this show command.
Total Current Sessions	The total number of sessions across all peers in the output of this show command.

Chapter 123

show mipha

This chapter includes the **show mipha** command output tables.

show mipha statistics ha-service

Table 312. show mipha statistics ha-service Command Output Descriptions

Field	Description
HA Service	The name of the HA service for which the statistics are displayed.
MIP AAA Authentication	
Attempts	The number of authentication attempts by the HA including those that are authenticated locally.
Success	The number of authentication attempts completed successfully by the HA including those that are authenticated locally.
Total Failures	The total number of failed AAA authentication attempts that were facilitated.
Actual Auth Failures	The total number of AAA authentication attempts that were rejected by the AAA server.
Misc Auth Failures	The total number of miscellaneous authorization failures.
Registration Request Received	
Total Received Reg	The total number of registration requests received.
Total Accepted Reg	The total number of registration requests accepted.
Total Denied Reg	The total number of registration requests that were denied.
Total Discarded Reg	The total number of registration requests that were discarded.
Congestion Discarded Reg	The total number of requests discarded when congestion control is enabled and the system is in a congested state.
Initial Reg Requests	
Received	The total number of initial registration requests received.
Accepted	The total number of initial registration requests accepted.
Denied	The total number of initial registration requests denied.
Renew Reg Requests	
Received	The total number of renewal registration requests received.
Accepted	The total number of renewal registration requests accepted.
Denied	The total number of renewal registration requests denied.
DeReg Requests	
Received	The total number of requests for de-registration received.
Accepted	The total number of requests for de-registration accepted.
Denied	The total number of requests for de-registration denied.
Registration Reply Sent	

Field	Description
Total	The total number of registration replies sent.
Accepted Reg	The total number of successful registration replies sent.
Accepted DeReg	The total number of successful de-registration replies sent.
Denied	The total number of denied registration replies sent.
Bad Request	The total number of denied registration replies that were sent with a reply code of 86H (Registration Denied - poorly formed request).
Mismatched ID	The total number of denied registration replies that were sent with a reply code of 85H (Registration Denied - registration identification mismatch).
MN Auth Failure	The total number of denied registration replies that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication).
FA Auth Failure	The total number of denied registration replies that were sent with a reply code of 84H (Registration Denied - home agent failed authentication).
Admin Prohibited	The total number of denied registration replies that were sent with a reply code of 81H (Registration Denied - administratively prohibited).
No Resources	The total number of denied registration replies that were sent with a reply code of 82H (Registration Denied - insufficient resources).
Simul Bindings Exceeded	The total number of denied registration replies that were sent with a reply code of 87H (Registration Denied - too many simultaneous mobility bindings).
Unknown HA	The total number of denied registration replies that were sent with a reply code of 88H (Registration Denied - unknown home agent address).
Rev Tunnel Unavailable	The total number of denied registration replies that were sent with a reply code of 89H (Registration Denied - reverse tunneling unavailable).
Rev Tunnel Mandatory	The total number of denied registration replies that were sent with a reply code of 8AH (Registration Denied - reverse tunneling mandatory).
Encap Unavailable	The total number of denied registration replies that were sent with a reply code of 8BH (Registration Denied - reverse tunneling encapsulation style unavailable).
Send Error	The total number of errors that occurred while sending replies.
Handoff Requests	
Received	The total number of handoff request received by HA for an existing session.
Accepted	The total number of handoff request accepted by HA.
Denied	The total number of handoff request denied by HA.
Unspecified Reason	The total number of denied registration replies that were sent with a reply code of 80H (Registration Denied - reason unspecified).
Unknown CVSE Rcvd	The total number of messages discarded because of an FA reply code of 100 (Critical Vendor Specific Extension Received).
UDP Encap Unavailable	Indicates registration denial caused by unavailable (minimal or GRE) UDP tunnel encapsulation modes.
RRQ Denied Overload/Congestion Control	

Field	Description
Admin Prohibited(reject)	The number ofRRQs rejected when congestion control is enabled and the system is in a congested state.
Unknown HA (redirect)	The number ofRRQs redirected to an alternate HA when congestion control is enabled and the system is in a congested state.
Registration Revocation	
Sent	Total registration revocation messages sent to the FA.
Retries Sent	Total registration revocation messages re-sent to the FA.
Ack Rcvd	Total registration revocation request acknowledgements received from the FA.
Not Acknowledged	Total registration revocation request messages that timed-out before an acknowledgement was received from the FA.
Rcvd	Total registration revocation request messages received from the FA.
Ack Sent	Total registration revocation request acknowledgements sent to the FA.
P-AAA Messages:	
BC Query Requests:	
Received	The total number of Binding Cache requests received from the proxy-AAA server.
Accepted	The total number of Binding Cache requests received from the proxy-AAA server that were accepted.
Denied	The total number of Binding Cache requests from the proxy-AAA server that were denied.
BC Query Responses:	
Sent	The total number of Binding Cache responses that were sent to the proxy-AAA server.
BC Found	The total number of Binding Cache responses that were sent to the proxy-AAA server that indicated that the requested binding context was found.
BC Not Found	The total number of Binding Cache responses that were sent to the proxy-AAA server that indicated that the requested binding context was not found.
IP Pool Overflow	The total number of Binding Cache responses that were sent to the proxy-AAA server that indicated that there is an IP Pool overflow condition for the requested binding context.
Miscellaneous	The total number of Binding Cache responses that were sent to the proxy-AAA server that indicated other miscellaneous errors for the requested binding context.
HA-IPSEC Tunnels	
Requests Received	The total number of HA-IPSEC tunnel session requests received.
Initiated	The total number of HA-IPSEC session requests received and initiated.
Denied	The total number of HA-IPSEC session requests received and denied.
Discarded	The total number of HA-IPSEC sessions initiated and discarded.
Connected	The total number of HA-IPSEC sessions initiated and connected.
Failed	The total number of HA-IPSEC sessions initiated, connected and failed.

Field	Description
Tunnel Data Received	
Total Packets	Total number of encapsulated packets received by this system.
IPIP	Total number of IP-in-IP encapsulated packets received by this system.
GRE	Total number of GRE tunneled packets received by this system.
IP-UDP	Total number of IP-in-UDP packets received by the system.
MIP-IPSEC	Total Number of MIP IP Sec packets received by the system.
Total Bytes	Total number of encapsulated bytes received by this system.
IPIP	Total number of IP-in-IP encapsulated bytes received by this system.
GRE	Total number of GRE encapsulated bytes received by this system
IP-UDP	Total number of IP-in-UDP bytes received by the system.
MIP-IPSEC	Total Number of MIP IP Sec bytes received by the system.
Errors	
Protocol Type Error	Total number of encapsulated packets received with protocol type errors.
GRE Key Absent	Total number of GRE tunneled key absent errors received.
GRE Checksum Error	Total number of checksum errors that occurred in GRE tunnels received by this system.
Invalid Packet Length	Total number of encapsulated packets received with invalid packet lengths.
No Session Found	Total number of errors that occurred due to no session being present in received tunnels.
Tunnel Data Sent	
Total Packets	The total number of encapsulated packets sent by this system.
IPIP	The total number of IP-in-IP encapsulated packets sent by this system.
GRE	The total number of GRE encapsulated packets sent by this system.
IP-UDP	Total number of IP-in-UDP packets sent by the system.
MIP-IPSEC	Total Number of MIP IP Sec packets sent by the system.
Total Bytes	The total number of encapsulated bytes sent by this system.
IPIP	The total number of IP-in-IP encapsulated bytes sent by this system.
GRE	The total number of GRE encapsulated bytes sent by this system
IP-UDP	Total number of IP-in-UDP bytes sent by the system.
MIP-IPSEC	Total Number of MIP IP Sec bytes sent by the system.
Total Disconnects	The total number of sessions that were disconnected.
Lifetime expiry	The total number of sessions that were disconnected due to the expiration of their lifetime setting.
Deregistrations	The total number of sessions that were disconnected due to de-registrations.

Field	Description
Admin Drops	The total number of sessions that were disconnected due to an administrative clearing of calls (i.e. executing the clear subscribers command).
FA Revocations	The total number of disconnects that were due to revocations received from the FA.
IPSEC Tunnel Down	The total number of sessions that were disconnected due to IPSEC tunnels down.
Other Reasons	The total number of disconnects that were due to reasons other than those already listed.
HA Monitoring	
Monitor RRQ Received	The total number of HA monitor request messages received by this HA due to inactivity.
Monitor RRP Sent	The total number of HA monitor response messages sent by this HA.

show mipha full username

Table 313. show mipha full username Command Output Descriptions

Field	Description
Username	Subscriber's username
Callid	Subscriber's call identification number
MSID	Subscriber's mobile station identification number (MSID)
Home Address	IP address assigned to the subscriber's mobile node for the session
HA Address	IP address of the HA facilitating the subscriber's MIP session
Send NAI Extension in Revocation Message	Indicates whether or not an NAI extension is sent in a revocation message for this user. Options are: - No - Yes
Binding#	The mobility binding record (MBR) number associated with a particular subscriber session. Since it is possible for a single subscriber to have multiple bindings, information for each of the subscriber's binding records will be displayed according to the MBR number.
Care of Address	The IP address of the device terminating the tunnel to the mobile node. The address may belong to either a Foreign Agent that is facilitating the subscriber's Mobile IP session or another device that the mobile node is associated (co-located) with.
FA Address	The IP address of the Foreign Agent that is facilitating the subscriber's Mobile IP session.
Lifetime	The maximum amount of time that the subscriber's session can remain registered.
Remaining Life	The amount of time that is currently available to the subscriber to remain registered.
Reverse Tunneling	Displays whether or not reverse tunneling is enabled for the subscriber's session.
Encapsulation Type	The encapsulation method used for the subscriber's session.
GRE Key	The key that uniquely identifies the subscriber session when the Generic Routing Encapsulation (GRE) protocol Encapsulation Type
IPSec Required	Indicates whether or not IPSec is required for the subscriber Mobile IP session.
IPSec Ctrl Tunnel Estab.	If IPSec is required for the session, this field indicates whether or not the control tunnel has been established.
IPSec Data Tunnel Estab.	If IPSec is required for the session, this field indicates whether or not the data tunnel has been established.
Revocation Negotiated	Indicates whether or not MIP Registration Revocation was negotiated between the FA and the HA for this subscriber session. Options are: - No - Yes

Field	Description
Rev I bit Negotiated	Indicates whether or not the Revocation I bit was negotiated. Possible values are : • No • Yes
Colocated COA	Indicates whether or not the subscribers that registered a MIP colocated COA directly with the HA. Options are: • No • Yes
NAT Detected	Indicates whether or not network address translation (NAT) is detected. Options are: • No • Yes
MN-HA-Key-Present	The security parameter index (SPI) key used to verify a trusted host environment and that communications are to be established between known hosts. Checks for presence of mobile node (MN) - home agent (HA) key. Options are: • True • False
MN-HA-SPI	Mobile node (MN) - home agent (HA) security parameter index (SPI).
FA-HA-Key-Present	The security parameter index (SPI) key used to verify a trusted host environment and that communications are to be established between known hosts. Checks for presence of the FA - HA key. Options are: • True • False
FA-HA-SPI	FA - HA security parameter index (SPI)
HA-RK-Key-Present	The HA root key (RK) received by the HA from the AAA in the Radius Access-Accept. Checks for presence of HA-RK key. Options are: • True • False Note: True indicates a WiMAX session.
HA-RK-SPI	HA - RK security parameter index (SPI) Note: This field applies to WiMAX sessions only.
HA-RK-Lifetime	The total lifetime applied to an HA-RK. Note: This field applies to WiMAX sessions only.
HA-RK-Remaining-Lifetime	The total remaining lifetime for the HA-RK. Note: This field applies to WiMAX sessions only.

show mipha peers ha-service

Table 314. show mipha peers ha-service Command Output Descriptions

Field	Description
Context	The name of the context where the HA service is located.
HA Service	The name of the HA service.
Peer Address	The IP address of the peer.
Current Sessions	The number of sessions currently running on the peer.
Total Sessions	The total number of current and past sessions for the peer.
IP Security	Specifies if IP security is enabled or disabled on the peer.
FA-HA Authentication	Specifies if FA-HA authentication is enabled or disabled on the peer.
Total Peers	The total number of peers in the output of this show command.
Total Current Sessions	The total number of sessions across all peers in the output of this show command.

Chapter 124

show mipv6ha

This chapter includes the **show mipv6ha** command output tables.

show mipv6ha-service all

Table 315. show mipv6ha-service all Command Output Descriptions

Field	Description
Service Name	The mipv6ha service name.
Context	The context in which the service is configured.
Bind	The bind status.
Max Subscribers	The maximum number of subscribers.
Local IPv6 Address	IPv6 address of the server where this service is located.
Lifetime	The accepted lifetime interval for this session.
Simul Bindings	Specifies the maximum number of “care-of” addresses that can simultaneously be bound for the same user as identified by NAI and Home address.
Setup Timeout	The session setup timeout duration.
Sequence Number Validation	Specifies the sequence number validation of the received MIPv6 control packet by the Home Agent (HA) as per RFC 3775.
Refresh Advice Option	Displays the refresh advice option in the binding acknowledgements sent by the home agent.
Refresh Interval Percent	Displays the amount of the granted lifetime to be used in the refresh interval mobility option in Binding Acknowledgement sent by the HA.
Timestamp Replay Protection	Displays the acceptable difference in timing (between timestamps) before rejecting packet.
Timestamp Tolerance	Total variation allowed in timestamp mismatch.
Default Subscriber	Name of the default subscriber.
AAA accounting	Displays if AAA accounting is enabled or disabled.
Service Status	Status of this service.
Newcall Policy	Specify that the new call policy enabled or disabled to handle new calls. Possible values are: • NONE • REJECT

show mipv6ha statistics

Table 316. show mipv6ha statistics Command Output Descriptions

Field	Description
MIP AAA Authentication:	
Attempts:	Total MIP AAA Authentication attempts.
Success:	Total MIP AAA Authentication attempts that were successful.
Total Failures:	Total MIP AAA Authentication attempts that failed.
Actual Auth Failures:	Actual number of MIP AAA Authentication that failed.
Misc Auth Failures:	Total number of MIP AAA Authentication that failed.
Binding Updates Received:	
Total Received:	Total number of Binding Updates that were received.
Total Accepted:	Total number of Binding Updates that were accepted.
Total Denied:	Total number of Binding Updates that were denied.
Total Discarded:	Total number of Binding Updates that were discarded.
Congestion Discarded Reg:	The total number of requests discarded when congestion control is enabled and the system is in a congested state.
Initial Binding Update Requests:	
Received:	Total number of Initial Binding Update Requests that were received.
Accepted:	Total number of Initial Binding Update Requests that were accepted.
Denied:	Total number of Initial Binding Update Requests that were denied.
Refresh Binding Update Requests:	
Received:	Total number of Refresh Binding Update Requests that were received.
Accepted:	Total number of Refresh Binding Update Requests that were accepted.
Denied:	Total number of Refresh Binding Update Requests that were denied.
DeReg Requests:	
Received:	Total number of requests for de-registration that were received.
Accepted:	Total number of requests for de-registration that were accepted.
Denied:	Total number of requests for de-registration that were denied.
Handoff Requests:	
Received:	Total number of requests for handoffs that were received.

Field	Description
Accepted:	Total number of requests for handoffs that were accepted.
Denied:	Total number of requests for handoffs that were denied.
Binding Acknowledgements Sent:	
Total:	Total number of requests for Binding Acknowledgements.
Accepted Reg:	The total number of registration requests accepted.
Accepted DeReg:	The total number of deregistration requests accepted.
Denied:	The total number of registration requests denied.
Send Error:	The total number of errors that occurred while sending replies.
Binding Update Deny Reasons:	
Insufficient Resources:	The total number of binding update requests that were denied because of insufficient resources.
Mismatched ID:	The total number of binding update requests that were denied because of a mismatched ID.
MN Auth Failure:	The total number of binding update requests that were denied because of a MN authentication failure.
Admin Prohibited:	The total number of registration requests that were denied due to being administratively prohibited.
Msg ID Required:	The total number of bind update denied with status code 91H (Mesg-Id-Required).
DAD Failed:	The total number of bind update denied with status code 86H (Duplicate Address Detection failed).
Not Home Subnet:	The total number of bind update denied with status code 84H (Not Home Subnet)
Sequence Out Of Window:	The total number of bind update denied with status code 87H (Sequence number Out of Window).
Reg Type Change Disallowed:	The total number of bind update denied with status code 8BH (Registration Type change disallowed).
Unspecified Reason:	The total number of bind update denied with status code 80H (Reason Unspecified).
Update Denied- Insufficient Resource Reasons:	The total number of binding update requests that were denied because of Insufficient Resources.
No Session Manager:	The total number of binding update requests that were denied due to the lack of available Session Manager tasks. This may occur when the system is booting up in the event that a Session Manager task terminated unexpectedly.
Binding Updates Discard Reasons:	
Congestion Discarded:	HAMGR discards when configured to drop packets on congestion
Checksum Error:	v6HA driver discard on checksum failure for BU packet
Initial Auth Pending:	V6HA driver discard when retry BU's are received. Discarded packet is included as part of Init/Renew/Dereg/Handoff request counters as packet is discarded before processing them in detail.
Session Not Found:	When HAMGR forwards RRQ for existing session but session is not found in Sessmgr
HAMGR Not Ready:	When HAMGR is not yet ready and packet buffering limit is exceeded

Field	Description
Decode Failure:	When BU packet decoding fails in HAMGR.
Invalid Buffer Length:	When there is mismatch in BU packet buffer length and expected length.

Chapter 125

show mme

This chapter includes the **show mme** command output tables.

show mme-service all

Table 317. show mme-service all Command Output Descriptions

Field	Description
Service name	The name of the MME service configured and running on the system.
Context	The name of the VPN context in which MME service configured and running on the system.
Status	Indicates whether MME service is started or not.
Bind	Indicates whether an S1-MME reference point is bound to an interface in the configured MME service or not.
S1-MME IP Address	The IP address of the chassis on which MME service is configured. This is the S1-MME interface IP address of MME service.
Crypto-Template Name	The configured crypto-template name associated with the MME service.
Max Subscribers	The configured number of subscribers allowed on the MME service.
S1-MME sctp port	The source port number for SCTP communication. This source SCTP port will be used for binding the SCTP socket to communicate with the eNodeB using S1-MME with this MME service
MME Code	The MME identifier in EPC networks. This is used to construct the MME identifier.
MME Group	The MME group identifier in EPC networks. This works as a group of MMEs in a shared network. The MME group is used to construct the MME identifier.
PLMN Id	The Public Land Mobile Network identifier of which this MME service belongs to. It contains Mobile Country Code (MCC) and Mobile Network Code (MNC).
Emergency Service Profile	Displays the name of the Emergency Service Profile associated with the MME service.
EGTP Context	The name of the VPN context in which Evolved GPRS Tunnelling Protocol (eGTP) service is configured and associated with this MME service to configure different interfaces with MME. Typically it is the destination context on system.
EGTP Service	The name of the Evolved GPRS Tunnelling Protocol (eGTP) service which is associated with this MME service to configure different interfaces with MME.
EGTP Sv Context	Shows the context to which the egtp-sv-service belongs.
EGTP Sv Service	The name of the eGTP Sv service which is associated with the MME service to communicate on the Sv interface.
SGTPC Context	Shows the context to which the sgtpc-service belongs.
SGTPC Service	The name of the SGTPC service which is associated with the MME service to communicate on GnGp interface.
MME HSS Context	The name of the context in which the HSS peer service is configured that communicates with an HSS associated with this MME service.
MME HSS Service	The name of the HSS peer service that communicates with an HSS associated with this MME service.

Field	Description
SGS Context	The name of the context in which the SGS service is configured that communicates with an EIR server associated with this MME service.
SGS Service	The name of the SGS service that communicates with an EIR server associated with this MME service.
Max bearers per MS	The maximum number of bearers per MS allowed with in this MME service. This can be configured between 1 and 11. By default 11 bearers supported per MS.
Max PDNs per MS	The maximum number of PDNs per MS allowed with in this MME service. This can be configured between 1 and 3. By default 3 bearers supported per MS.
Peer MME GUMMEI	Displays the IP addresses of peer MMEs looked up using GUMMEI during handovers between any radio access technology and the E-UTRAN.
Peer MME TAI	Displays the configured TAI Management Database name associated with the service used for peer MME selection.
Peer SGSN RAI	Displays the parameters configured for peer SGSN discovery using the Routing Area Identity.
Peer SGSN RNCID	Displays the parameters configured for peer SGSN discovery using the Radio Network Controller ID.
NRI Length	Displays the NRI length entries configured for this MME service. If none are configured, the display shows "None".
PGW	This group The parameters related to Packet Data Network Gateway (P-GW), which is selected by this MME service for providing PDN connectivity to subscribers. This group contains following parameters: • Address: The IP address of P-GW which is selected by this MME service for providing PDN connectivity to subscribers. • S5-S8 Protocol: The protocol configured to communicate between Serving Gateway (S-GW) and P-GW on S5 and S8 interface. P-MIP and GTP can be configured on this interface. By default GTP is supported on this interface. • Weight: The weight allotted the selected P-GW for selection of P-GW by MME service.
SGW Pool	Displays the configured TAI Management Object name associated with the service used for creating S-GW pools that, in turn, are used for S-GW selection.
Peer MME DNS Context	The name of the context where the DNS configuration resides for peer MME associations and discoveries.
Peer SGSN DNS Context	The name of the context where the DNS configuration resides for peer SGSN associations and discoveries.
PGW DNS Context	The name of the context in which the DNS service configured to locate and select the P-GW by this MME Service.
SGW DNS Context	The name of the context in which the DNS service is configured to locate and select the S-GW by this MME Service.
Implicit Detach Timeout	The timeout duration in seconds after which subscriber will implicitly be detached from the network if there is no activity. This value can be configured from 1 second to 3600 seconds. By default timeout duration for this timer is 3600 seconds. This timer starts when mobile reachable timer expires while the network is in EMM-IDLE mode and Idle mode Signaling Reduction (ISR) is activated and stops when NAS signalling connection established. Note: Generally this timer value is 240 seconds (4 minutes) more than the timeout value of T3423 timer.

Field	Description
T3412 Timeout	Displays the timeout duration configured for the T3412 timer. This timer is used for periodic tracking area update (P-TAU). When this timer expires, the periodic tracking area updating procedure starts and the timer is set to its initial value for the next start. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. This timer starts when the UE goes from EMM-CONNECTED to EMM-IDLE mode and stops when the UE returns to EMM-CONNECTED mode.
T3413 Timeout	Displays the timeout duration configured for the T3413 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. The timer starts when MME initiates the EPS paging procedure to the EMM entity in the network and requests the lower layer to start paging. This timer stops for the paging procedure when a response is received from the UE.
T3422 Timeout	Displays the timeout duration configured for the T3422 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. This timer starts when the MME initiates the detach procedure by sending a DETACH REQUEST message to the UE and stops upon receipt of the DETACH ACCEPT message.
T3423 Timeout	Displays the timeout duration configured for the T3423 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. This timer starts when the UE enters the EMM-DEREGISTERED state or when entering the EMM-CONNECTED mode. It stops while the UE is in EMM-REGISTERED-NO-CELL-AVAILABLE state and Idle mode Signaling Reduction (ISR) is activated.
T3450 Timeout	Displays the timeout duration configured for the T3450 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. This timer starts when the MME initiates the Globally Unique Temporary Identifier (GUTI) reallocation procedure by sending a GUTI REALLOCATION COMMAND message to the UE and stops upon receipt of the GUTI REALLOCATION COMPLETE message. This timer is also used for tracking area update procedures.
T3460 Timeout	Displays the timeout duration configured for the T3460 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. The timer starts when the network initiates the authentication procedure by sending an AUTHENTICATION REQUEST message to the UE and stops upon receipt of the AUTHENTICATION RESPONSE message.
T3470 Timeout	Displays the timeout duration configured for the T3470 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. The timer starts when the network initiates the identification procedure by sending an IDENTITY REQUEST message to the UE and stops upon receipt of the IDENTITY RESPONSE message.
Mobile Reachable Timeout	Displays the timeout duration after which the reachability procedure will be discarded and a reattempt starts. This duration can be configured to any value between 1 and 20 seconds. By default it is 4 second.
T3485 Timeout	Displays the timeout duration configured for the T3485 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. This timer is used for default EPS bearer context activation procedure. This timer starts when the MME sends an ACTIVATE DEFAULT EPS BEARER CONTEXT REQUEST message to the UE and stops when it receives an ACTIVATE DEFAULT EPS BEARER CONTEXT ACCEPT or ACTIVATE DEFAULT EPS BEARER CONTEXT REJECT message from the UE.

Field	Description
T3486 Timeout	Displays the timeout duration configured for the T3486 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. This timer starts when the MME sends a MODIFY EPS BEARER CONTEXT REQUEST message to the UE and stops when it receives a MODIFY EPS BEARER CONTEXT ACCEPT or REJECT message from the UE.
T3495 Timeout	Displays the timeout duration configured for the T3495 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. This timer is used for default EPS bearer context deactivation procedure. This timer starts when the MME sends a DEACTIVATE EPS BEARER CONTEXT REQUEST message to the UE and stops when it receives a DEACTIVATE EPS BEARER CONTEXT ACCEPT or DEACTIVATE EPS BEARER CONTEXT REJECT message from the UE.
T3489 Timeout	Displays the timeout duration configured for the T3489 timer. This timer can be configured to any value between 1 and 20 seconds. By default it is 6 second. This timer starts when the MME sends an ESM INFORMATION REQUEST message to the UE and stops when it receives an ESM INFORMATION RESPONSE message from the UE.
Encryption Algorithms	This group The encryption algorithm and its priority applied for security procedures through this MME service. It indicates following settings: • Priority: The priority set for applied encryption algorithm. Possible priority values are between 1 through 3. Least value has the highest preference • Algorithms: The applied encryption algorithm. Possible algorithms are: • 128-eea0: Null ciphering algorithm (128-EEA0) for LTE encryption as the encryption algorithm for security procedures. This is the default encryption algorithm applicable for security procedures. • 128-eea1: SNOW 3G synchronous stream ciphering algorithm (128-EEA1) for LTE encryption as the encryption algorithm for security procedures • 128-eea2: Advance Encryption Standard (AES) ciphering algorithm (128-EEA2) for LTE encryption as the encryption algorithm for security procedures By default 128-eea0 encryption algorithm is applicable.
Integrity Algorithms	This group The integrity algorithm and its priority applied for security procedures through this MME service. It indicates following settings: • Priority: The priority set for applied integrity algorithm. Possible priority values are between 1 through 3. Least value has the highest preference • Algorithms: The applied integrity algorithm. Possible algorithms are: • 128-eia1: SNOW 3G synchronous stream ciphering algorithm (128-EIA1) for LTE integrity as the integrity algorithm for security procedures. • 128-eia2: Advance Encryption Standard (AES) ciphering algorithm (128-EIA2) for LTE encryption as the integrity algorithm for security procedures. This is the default integrity algorithm for security procedures. By default 128-eia2 integrity algorithm is applicable.
Setup Timeout	The setup timeout duration configured for call setup for MME calls. Range: 1 to 10000. Default: 60 seconds

Field	Description
UE DB Purge Timeout	The configured timeout duration in minutes to purge UE record from UE database which is maintained by MME as cache of EPS context per UE keyed by IMSI/GUTI to allow UE to attach by GUTI and reuse previously established security parameters. This cache will be maintained in each session manager where the first attach occurred for an UE and purge after configured timeout period expires. Range: 1 to 20160. Default: 10080 mins
Maximum paging attempts	Indicates number of paging attempts configured in an MME service to send for an UE while in idle mode. Range: 1 to 10 Default: 3
Policy for Idle Mode Detach	Displays the configured user policy in an MME service for detach procedure when a UE is in IDLE mode. Possible actions are: • Explicit: Detach procedure starts after paging the UE • Implicit: Detach procedure starts without paging the UE Default: Implicit detach
NAS Max Retransmissions Count	Displays the configured maximum number of retransmissions for each configured NAS message.
Set UE Time (attach processing)	Displays the configuration of the set-ue-time keyword in the policy attach command. Possible states are Enabled or Disabled.
IMEI Query (attach processing)	Displays the mobile equipment identity query type for the UE related procedure configured in the attach policy in the MME service. Possible actions are: • IMEI: System configured to use International Mobile Equipment Identity as query type for UE related procedures. • IMEI-SV: System configured to use International Mobile Equipment Identity (IMEI) - Software Version (SV) as query type for UE related procedures. • None: System configured to not to use any type, neither IMEI or IMEI-SV, as query type for UE related procedures. Default: None
EIR Query (attach processing)	Displays the Equipment Identity Register query status in the attach policy configuration for the MME service. Possible states are Enabled or Disabled.
Deny-greylisted (attach processing)	Displays whether the MME will deny a call if the equipment is determined to be on the grey list during the attach procedure. By default, this option is disabled; the MME will allow this call to go through. To enable this option, refer to the verify-equipment-identity function of the policy attach command.
Deny-unknown (attach processing)	Displays whether the MME will deny a call if the Equipment Identity Register responds with EQUIPMENT STATUS UNKNOWN to a Mobile Identity Check Request during the attach procedure. By default, this option is disabled; the MME will allow the call to go through. To enable this option, refer to the verify-equipment-identity function of the policy attach command.
Allow-ECA timeout (attach processing)	Displays whether the MME will allow a call to go through if no response is received from an Equipment Identity Register for a Mobile Identity Check Request during the attach procedure. By default, this option is disabled; the MME will deny this call. To enable this option, refer to the verify-equipment-identity function of the policy attach command.
Verify Emergency (attach processing)	Displays whether the MME will query the EIR for equipment status during Emergency attach processing. By default, this option is disabled. To enable this option, refer to the verify-equipment-identity function of the policy attach command.

Field	Description
Set UE Time (tau processing)	Displays the configuration of the <code>set-ue-time</code> keyword in the <code>policy tau</code> command. Possible states are Enabled or Disabled.
IMEI Query (TAU processing)	Displays the mobile equipment identity query type for the UE related procedure configured in the TAU policy in the MME service. Possible actions are: - IMEI: System configured to use International Mobile Equipment Identity as query type for UE related procedures. - IMEI-SV: System configured to use International Mobile Equipment Identity (IMEI) - Software Version (SV) as query type for UE related procedures. - None: System configured to not to use any type, neither IMEI or IMEI-SV, as query type for UE related procedures. Default: None
EIR Query (TAU processing)	Displays the Equipment Identity Register query status in the TAU policy configuration for the MME service. Possible states are Enabled or Disabled.
Deny-greylisted (TAU processing)	Displays whether the MME will deny a call if the equipment is determined to be on the grey list during the TAU procedure. By default, this option is disabled; the MME will allow this call to go through. To enable this option, refer to the <code>verify-equipment-identity</code> function of the <code>policy attach</code> command.
Deny-unknown (TAU processing)	Displays whether the MME will deny a call if the Equipment Identity Register responds with EQUIPMENT STATUS UNKNOWN to a Mobile Identity Check Request during the TAU procedure. By default, this option is disabled; the MME will allow the call to go through. To enable this option, refer to the <code>verify-equipment-identity</code> function of the <code>policy attach</code> command.
Allow-ECA timeout (TAU processing)	Displays whether the MME will allow a call to go through if no response is received from an Equipment Identity Register for a Mobile Identity Check Request during the TAU procedure. By default, this option is disabled; the MME will deny this call. To enable this option, refer to the <code>verify-equipment-identity</code> function of the <code>policy attach</code> command.
Verify Emergency (TAU processing)	Displays whether the MME will query the EIR for equipment status during Emergency TAU processing. By default, this option is disabled. To enable this option, refer to the <code>verify-equipment-identity</code> function of the <code>policy attach</code> command.
PDN reconnect type	Displays the PDN reconnect type as configured for the MME service. Possible values are multiple, reject, or restart.
Newcall Policy	Indicates whether the policy to handle new call requests for busy-out conditions on MME service is configured or not. If configured, by default it will be set to reject the new calls during busy-out condition.
Policy Overload	The configured policy for system to act on any new session/call request when system is crossing the threshold limits of sessions/calls in an MME service. Possible actions are: Drop: Drops the packets incoming with new session requests to avoid overload on MME node Reject: Rejects the new session/call request and responds with a reject message when threshold for allowed call session is crossed on MME node
Location Reporting	Displays the configuration of the Location Reporting function for the service. Possible configurations are Enabled or Disabled.
Heuristic Paging	Displays the configuration of the Heuristic Paging function for the service. Possible configurations are Enabled or Disabled.

Field	Description
Policy Sctp-Down	Displays the configuration of the SCTP-Down policy function for the service. Possible configurations are Detach-UE or Idle-Mode-Entry.
Policy Inter-RAT Indirect Fwd Tunnels	Display whether indirect forwarding is allowed during 3G to 4G handovers. Possible states are Enabled or Disabled.
Policy S1-Reset	Displays the configuration of the S1-Reset policy function for the service. Possible configurations are Detach-UE or Idle-Mode-Entry.
Relative Capacity	Displays the configuration of the Relative Capacity function for the service. This field displays a number between 0 and 255 representing the weight of the MME to the eNodeB for load balancing pools of MMEs.
Trap S1 Initial Establishment	Displays whether traps will be sent for every initial S1 connection between the MME and the eNodeB. Possible states are Enabled or Disabled.
Trap S1 Path Establishment	Displays whether a trap will be sent when the S1 Path is established.
ENodeB Cache Timeout	Shows the time in minutes the ENodeB information is cached after the ENodeB terminates a connection.
Subscriber Map	Displays the name of the subscriber map associated with the service.
Lte Emergency Profile	Displays the name of the lte emergency profile associated with the mme-service. In order to support LTE emergency services, an lte emergency profile must be configured under lte-policy and be associated with the mme-services.
Network (Across All RATs)	Displays the configuration of the Network policy function for the service. Possible configurations are Dual Addressing Supported or Dual Addressing Not Supported.
MME Manager Recovery	Displays the configuration of the MME Manager Recovery function for the service. Possible configurations are Reset S1 Peers or No Reset S1 Peers.
GTPv2 Piggybacking	Displays the configuration of the GTPv2 Piggybacking function for the service. Possible configurations are Enabled or Disabled.



Important: The following fields are only available in 12.2 and earlier releases.

MME Offloading	Specifies if MME offloading is enabled or disabled.
MME Init Release Timeout	The timeout for triggering the IDLE MODE ENTRY procedure with cause “Load balancing TAU required” for UEs that are ECM_CONNECTED. This field is only visible if MME offloading is enabled.
MME Paging Init Timeout	The timeout for triggering the PAGING procedure for UEs that are ECM_IDLE. After bringing the UE back to ECM_CONNECTED, the IDLE MODE ENTRY procedure is triggered with the cause “Load balancing TAU required”. This field is only visible if MME offloading is enabled.



Important: The previous fields are only available in 12.2 and earlier releases.

Field	Description
S1 MME IP QoS DSCP	Displays the diffserv code point marking to be used for sending packets of a particular QoS class between the MME and eNodeB as configured in the MME service.
S1AP SCTP Parameters	
SCTP Param Template Associated	Displays the name of the SCTP Parameter Template associated with the service.
SCTP Param Timestamp	Displays the time when the SCTP Parameter Template was associated with the MME service.
SCTP Alpha	Displays the SCTP Retransmission Timeout (RTO) alpha value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Beta	Displays the SCTP Retransmission Timeout (RTO) beta value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Checksum Type	Displays the SCTP checksum type as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section. Possible values are ADLER32 or CRC32.
SCTP Valid Cookie Lifetime	Displays the SCTP cookie lifetime value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Max Assoc Retrans	Displays the maximum number of retransmissions for SCTP associations value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Max Number of In Streams	Displays the maximum number of incoming streams for SCTP value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Init Retransmissions	Displays the maximum number of retransmissions for SCTP initiations value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Max MTU	Displays the maximum Maximum Transmission Unit (MTU) size for SCTP value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Max Number of Out Streams	Displays the maximum number of outgoing streams for SCTP value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Path Retransmissions	Displays the maximum number of retransmissions for SCTP paths value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Min MTU	Displays the minimum Maximum Transmission Unit (MTU) size for SCTP value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP RTO Initial	Displays the initial time for SCTP Retransmission Timeout (RTO) value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP RTO Max	Displays the maximum time for SCTP Retransmission Timeout (RTO) value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP RTO Min	Displays the minimum time for SCTP Retransmission Timeout (RTO) value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Sack Frequency	Displays the frequency for SCTP Selective Acknowledgement value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Sack Period	Displays the period of time for SCTP Selective Acknowledgement value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.

Field	Description
SCTP Start MTU	Displays the initial Maximum Transmission Unit (MTU) size for SCTP value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Heartbeat Status	Displays the SCTP heartbeat status as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section. Possible values are Enabled or Disabled.
SCTP HeartBeat Timer	Displays the SCTP heartbeat timer value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Bundle Status	Displays the SCTP data chunk bundle status as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section. Possible values are Enabled or Disabled.
SCTP Bundle Timer	Displays the SCTP data chunk bundle timer value as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section.
SCTP Alternate Accept Flag	Displays the SCTP additional lifetime accept flag status as configured in the SCTP Parameter Template defined at the beginning of the S1 AP SCTP Parameters section. Possible values are Enabled or Disabled.
MSC	Configuration of the SRVCC MSC Server for this MME service. This is the MSC server that the MME will use to interface with for the Sv interface.

show mme-service db record all

Displays the MME database records for all sessions .

Table 318. show mme-service db record imsi Command Output Descriptions

Field	Description
DB Record State	Displays the current state of the db record: • (C) - Connected • (c) - Connecting • (D) - Detached
Integrity Algorithm	Displays the integrity algorithm applied for security procedures for this subscriber: • (S) - EIA1: SNOW 3G synchronous stream ciphering algorithm (128-EIA1). • (A) - EIA2: Advance Encryption Standard (AES) ciphering algorithm (128-EIA2). • (N) - EIA0: No integrity protection.
Encryption Algorithms	Displays the encryption algorithm applied for security procedures for this subscriber. • (S) - EEA1: SNOW 3G synchronous stream ciphering algorithm (128-EEA1) for LTE encryption. • (A) - EEA2: Advance Encryption Standard (AES) ciphering algorithm (128-EEA2) for LTE encryption. • (N) - EEA0: No encryption algorithm.
Call ID	The unique call identifier value stored for a subscriber in MME database record as lookup key. Call identity is an 8 digit hex number of attached call to an MME service. Call-id will be zero if the db record is not bound to an attached call.
IMSI	The IMSI (International Mobile Subscriber Identity) value stored for a subscriber in MME database record as lookup key.
GUTI	The Globally Unique Temporary Identifier (GUTI) value stored for a subscriber in MME database record as lookup key. GUTI is constructed with following identifiers: • PLMN (MMC and MNC) • MME Group ID (MMEGI) • MME Code (MMEC) • MME TMSI (M-TMSI)

show mme-service db record imsi

Displays the MME database records for sessions grouped in session instances on this system and filtered by IMSI.

Table 319. show mme-service db record imsi Command Output Descriptions

Field	Description
Sessmgr Instance	The instance of the running Session Manager that serves this MME database.
MME Service	The name of the MME service associated with the database record.
Lookup Keys	This group displays the various lookup key information stored in MME database record for specific Session Manager instance.
IMSI	The IMSI (International Mobile Subscriber Identity) value stored for a subscriber in MME database record as lookup key. IMSI includes the Mobile Country Code (MCC) and Mobile Network Code (MNC).
Service-id	The system-generated service ID number.
GUTI	The Globally Unique Temporary Identifier (GUTI) value stored for a subscriber in MME database record as lookup key. GUTI is constructed with following identifiers: • PLMN (MMC and MNC) • MME Group ID (MMEGI) • MME Code (MMEC) • MME TMSI (M-TMSI)
Call-ID	The unique call identifier value stored for a subscriber in MME database record as lookup key. Call identity is an 8 digit hex number of attached call to an MME service. Call-id will be zero if the db record is not bound to an attached call.
Subscription Data	This group The subscription data available in database record for subscriber.
IMEI	The International Mobile Equipment Identity (IMEI) value stored for a subscriber in MME database record as subscription data of that subscriber.
MSISDN	The MSISDN value stored for a subscriber in MME database record as subscription data of that subscriber.
Context Identifier	Context-identifier sent by the HSS. This represents the default APN.
RFSP Index	Indicates the RAT/Frequency Selection Priority (RFSP) Index sent by the HSS and used to identify a specific Radio Resource Management (RRM) configuration.
Charging characteristic	Indicates the charging characteristics for this subscriber sent by the HSS, for example: normal, prepaid, flat rate.
APN OI Replacement	Indicates the domain name to replace the APN OI when constructing the PDN-GW FQDN upon which to perform DNS queries. This replacement applies for all the APNs in the subscriber's profile.
Oper Determined Barring	Indicates that the status of the operator determined barring.

Field	Description
ICS Indicator	The IMS Centralized Services indicator set in the ULA, either (0) false/disabled, or (1) true/enabled.
APN Config Data	This group displays the APN configuration data stored in MME database record.
Service Selection	The name of the APN selected.
Max Req Bandwidth UL	The maximum bandwidth requested for upload for this APN.
Max Req Bandwidth DL	The maximum bandwidth requested for download for this APN.
QoS Class Id	The QoS Class Identifier (QCI) configured for this APN. If the MME has not received the QCI from the HSS, "Not Available" will be displayed.
Priority level	The traffic priority level configured for this APN.
Context Identifier	The context identifier where APN is configured.
VPLMN Dynamic ADDR allowed	Indicates whether dynamic address is allowed for visiting PLMN or not.
3GPP-Chrg Characteristics	The configured charging characteristics for this APN.
PDN-GW Name	The name of the P-GW where this APN is configured.
PDN-GW Realm	The realm of the P-GW which contains the configuration for this APN.
PDN-GW Address	The IP address of the P-GW which contains the configuration for this APN.
HSS-DB Data	This group displays HSS Database data information.
HSS Update Type	Displays the update type the MME must respond to when the HSS makes a request for UE reachability when the UE moves from idle-mode to connected mode. Possible update types are: • Notify Request: Specifies that the HSS will send the MME a Notify Request message and expect a Notify Response message in return. • Update Location Request: Specifies that the HSS will send a Cancel Location Request or a Reset Request message and expect an Update Location Request message in return. Cancel Location Request and Reset Request have a higher precedence then Notify Request, hence an Update Location Request is sent if a Cancel Location Request or Reset Request is received after a Notify Request, and a Notify Response is not sent.

show mme-service db statistics

Table 320. show mme-service db statistics Command Output Descriptions

Field	Description
Total DB record allocated	The total number of database records allocated to MME calls/UE.
Total DB record reactivated	The total number of database records for reactivated MME sessions.
Total DB record detached	The total number of database records for detached MME sessions.
Total DB record purged	The total number of database records for purged MME sessions.
Purge Type	This group The database record statistics for purged session of various types.
Timeout	The total number of sessions purged due to Timeout reason.
DB record limit reached	The total number of sessions purged due to database record limit crossed.
UE not connected	The total number of sessions purged as UE was not connected.
HSS initiated	The total number of sessions purged where purging was initiated by HSS.
IMSI mgr initiated	The total number of sessions purged where purging was initiated by IMSI manager.
Others	The total number of sessions purged where purging was happened due to reasons other than listed in this table.
Current DB record count	The total record count in database including all states.
State Connecting	The total record count in database in connecting state.
State Connected	The total record count in database in connected state.
State Detached	The total record count in database in detached state.

show mme-service enodeb-association full

Table 321. show mme-service enodeb-association full Command Output Descriptions

Field	Description
MMEMgr	The instance number MME Manager for which the information are displayed here.
Peerid	The identifier of peer MME of which statistic are displayed.
Global ENodeB ID	The global eNodeB identifier which is associated with this peer node.
eNodeB Name	The eNodeB name as reported by the eNodeB.
MME Service Name	The name of the MME service running on peer node.
MME Service Address	The IP address which is used by MME service to connect with eNodeB.
MME Service Port	The port number which is used by MME service to connect with eNodeB.
eNodeB Port	The port number of eNodeB which is used by eNodeB to associate with MME service.
eNodeB IP Address(s)	The IP address of eNodeB which is used by eNodeB to associate with MME service.
Crypto-map Name	The name of the crypto map supporting this EnodeB association.
Paging DRX	The paging discontinuous reception set for paging procedure between eNodeB and MME.
Supported TAI(s)	The id of supported Tracking Area Identifier of which this eNodeB and MME belongs too. The Tracking Area Identity is constructed from the MCC (Mobile Country Code), MNC (Mobile Network Code) and TAC (Tracking Area Code).
CSG ID(s)	The closed subscriber groups Ids supported per eNodeB association with an MME service. A Closed Subscriber Group is a collection of cells within an eUTRAN and UTRAN that are open to only a certain group of subscribers. Within a PLMN, a Closed Subscriber Group is identified by a Closed Subscriber Group Identity (CSG-ID). The CSG ID shall be fix length 27 bit value.

show mme-service session all

Displays service and session state information for all sessions currently on the system.

Table 322.show mme-service session all Command Output Descriptions

Field	Description
Attach Type	Display the attach type that the subscriber is using. The possible access types are: - A: Initial EPS - B: Combined EPS IMSI - C: Handover EPS - D: Combined Handover EPS IMSI
Security Status	Displays the security status of the session. The possible call states are: - A: No Integrity Check, No Ciphering - B: Integrity Check, No Ciphering - C: Integrity Check, Ciphering
ESM State	Displays the ESM state of the session. The possible call states are: - C: Connected - I: Idle
IPv2/IPSec	Displays if IPSec is used during the session.
CALLID	The EPS subscriber's call identity in 8 digit hex number of connected call to an MME service.
MSID	Displays the EPS subscriber's mobile station identification (MSID) number.
Num PDNs	Displays the total number of PDNs connected for a UE in this session.
Num Bearers	Displays the total number of bearers activated for a UE in this session.

show mme-service session counters

Table 323. show mme-service session counters Command Output Descriptions

Field	Description
Username	Displays the EPS subscriber's username.
Callid	The EPS subscriber's call identity in 8 digit hex number of connected call to an MME service.
MSID	Displays the EPS subscriber's mobile station identification (MSID) number.
EMM Events	This group displays the statistics of all Evolved Mobility Management (EMM) events associated with all MME services on the system.
Authentications	This group displays the all EMM authentication attempts/successes/failures with EMM events associated with all MME services on the system.
Attempted	The total number of EMM authentication attempts made for all MME services on the system.
Success	The total number of successful EMM authentication attempts for all MME services on the system.
Failures	The total number of failed EMM authentication attempts for all MME services on the system.
Tracking Area Update Events	This group displays the all tracking area update (TAU) event attempts/successes/failures associated with all MME services on the system.
Attempted	The total number of EMM TAU attempts made for all MME services on the system.
Success	The total number of successful EMM TAU attempts for all MME services on the system.
Failures	The total number of failed EMM TAU attempts for all MME services on the system.
ECM Events	This group displays the statistics of all EMM Control Management (ECM) events associated with all MME services on the system.
Idle Mode Entry Events	This group displays the all idle mode entry event attempts/successes/failures associated with all MME services on the system.
Service Request Events	This sub-group displays the ECM service request event attempts/successes/failures associated with all MME services on the system.  Important: In Release 14.0 and later, this group of counters is deprecated and replaced by the UE Requested Service Request Events and NW Initiated Service Request Events groups.
Paging Initiation Events	This group displays the all paging initiation event attempts/successes/failures associated with all MME services on the system.
Attempted	The total number of attempts made for specific ECM event associated with all MME services on the system.
Success	The total number of successful attempts for specific ECM event associated with all MME services on the system.

Field	Description
Failures	The total number of attempts failed for specific ECM event associated with all MME services on the system.
ESM Events	This group displays the statistics of all EPS Session Management (ESM) events associated with all MME services on the system.
PDN Connections	This group displays the all statistics for PDN connection attempts/successes/failures associated with all MME services on the system.
PDN Disconnections	This group displays the all statistics for PDN disconnection attempts/successes/failures associated with all MME services on the system.
Default Bearer Activation	This group displays the all statistics of all default EPS bearer activation attempts/successes/failures associated with all MME services on the system.
NW Initiated Dedicated Bearer Activation	This group displays the all statistics of all network-initiated dedicated EPS bearer activation attempts/successes/failures associated with all MME services on the system.
UE Initiated Dedicated Bearer Activations	This group displays the all statistics of all UE-initiated dedicated EPS bearer activation attempts/successes/failures associated with all MME services on the system.
PGW/SGW Initiated Bearer Deactivations	This group displays the all statistics of all P-GW/S-GW-initiated EPS bearer deactivation attempts/successes/failures associated with all MME services on the system.
MME Initiated Bearer Deactivations	This group displays the all statistics of all MME-initiated EPS bearer deactivation attempts/successes/failures associated with all MME services on the system.
UE Initiated Bearer Deactivations	This group displays the all statistics of all UE-initiated EPS bearer deactivation attempts/successes/failures associated with all MME services on the system.
PGW/SGW Initiated Bearer Modifications	This group displays the all statistics of all P-GW/S-GW-initiated EPS bearer modification attempts/successes/failures associated with all MME services on the system.
HSS Initiated Bearer Modifications	This group displays the all statistics of all HSS-initiated EPS bearer modification attempts/successes/failures associated with all MME services on the system.
UE Initiated Bearer Modifications	This group displays the all statistics of all UE-initiated EPS bearer modification attempts/successes/failures associated with all MME services on the system.
Attempted	The total number of attempts made for specific ESM event associated with all MME services on the system.
Success	The total number of successful attempts for specific ESM event associated with all MME services on the system.
Failures	The total number of attempts failed for specific ESM event associated with all MME services on the system.
Handover Events	This group displays the statistics of all handover events associated with all MME services on the system.
X2-based handovers	This group displays the all X2-based (intra-MME) handover attempt/success/failure events associated with all MME services on the system.
S1-based handovers	This group displays the all S1-based (Inter-MME) handover attempt/success/failure events associated with all MME services on the system.
Attempted	The total number of attempts made for specific EPS handover event associated with all MME services on the system.

Field	Description
Success	The total number of successful attempts for specific EPS handover event associated with all MME services on the system.
Failures	The total number of attempts failed for specific EPS handover event associated with all MME services on the system.
Total NAS Control Messages	This group displays the statistics of all NAS control messages sent or received by an MME services on the system.
Sent	This sub-group displays the statistics of all NAS control messages sent by an MME services on the system.
Clear-text messages	The total number of NAS control messages with “clear-text” flag received by all MME services on the system.
Integrity-check enabled	The total number of NAS control messages with “Integrity-Check Enabled” flag received by all MME services on the system.
Ciphered messages	The total number of NAS control messages with “Ciphered” flag received by all MME services on the system.
Retransmissions sent	The total number of NAS control messages with “retransmission-sent” flag sent by all MME services on the system.
Failures	The total number of NAS control messages with “failure” flag sent by all MME services on the system.
Received	This sub-group displays the statistics of all NAS control messages received by an MME services on the system.
Clear-text messages	The total number of NAS control messages with “clear-text” flag received by all MME services on the system.
Integrity-check enabled	The total number of NAS control messages with “Integrity-Check Enabled” flag received by all MME services on the system.
Ciphered messages	The total number of NAS control messages with “Ciphered” flag received by all MME services on the system.
Accepted	The total number of NAS control messages received with “Accepted” flag by all MME services on the system.
Discarded	The total number of NAS control messages received with “Discarded” flag by all MME services on the system.
Denied	The total number of NAS control messages received with “Denied” flag by all MME services on the system.
Decode failures	The total number of NAS control messages received with “Decode failure” flag by all MME services on the system.

show mme-service session full

Table 324. show mme-service session full Command Output Descriptions

Field	Description
SessMgr Instance	The Session Manager instance managing this session.
MSID	The UE identity (MS Identity) of connected subscriber to an MME service, and whether the subscriber is unauthenticated (such as during emergency attach).
Callid	The call identity in 8 digit hex number of connected call to an MME service.
MME Service	The name of the serving MME service of which information is displayed.
MME HSS Service	The name of the serving MME-HSS service which is used for AAA for this subscriber with HSS on S6a interface.
EGTP S11 Service	The name of the serving eGTP service which is used for connectivity between MME and S-GW on S11 interface.
MME S1 Address	The IP address of MME used for connecting with eNodeB on S1-MME interface.
EGTP S11 Address	The IP address assigned to eGTP service which is used for connectivity between MME and S-GW on S11 interface.
ME Identity	The mobile equipment identity of connected UE.
GUTI	The Globally Unique Temporary Identifier (GUTI) used for this subscriber session. GUTI is constructed with following identifiers: • PLMN (MMC and MNC) • MME Group ID (MMEGI) • MME Code (MMEC) • MME TMSI (M-TMSI)
MSISDN	The Mobile Station International ISDN Number (MSISDN) of connected EPS subscriber to an MME service.
EMM State	The status of EPS Mobility Management (EMM) session of connected subscriber. Possible status are: • Registered • Connected
ECM State	The status of EPS Connection Management (ECM) session of connected subscriber. Possible status are: • Registered • Connected • Idle
Attach type	Indicate the type of UE attachment of active subscriber to MME service, for example: Emergency or Initial EPS.

Field	Description
Active SGW S11 Addr	The IP address of S-GW connected to MME on S11 interface.
UE Offloading	Displays the UE offload state for load rebalancing. Possible values are None, Marked, In-Progress and Done.
UE Reachability Timer	The configured value of the mobile reachability timer set for tracking UE in EMM session.
Remaining Time	The remaining time in seconds out of the configured value of the mobile reachability timer in the EMM session.
Paging Proceed Flag (PPF)	The current state of the Paging Proceed Flag indicating whether or not the UE is sending periodic TAUs within the span of the mobile reachability timer. If the UE fails to send a TAU within the timer value, this flag is set to "Paging Disabled" indicating that the MME is no longer paging the UE.
UE Capability Information	This group shows the UE Capability information for connected UE received by an MME service.
Radio Capability	The radio capability information received by an MME service for connected UE in UE capability exchange message.
Security Mode Information	This group shows the status of NAS integrity check and NAS ciphering along with applicable algorithm as security mode information. It contains following information: • NAS Integrity Check • NAS Integrity Check Algorithm • NAS Ciphering • NAS Ciphering Algorithm
Active ENodeB information	This group shows the information of active eNodeB serving to this session.
Global ENodeB ID	The global identifier of active eNodeB serving to this session.
S1AP End Point	The IP address used by eNodeB on S1AP interface to connect with MME service.
Crypto-map Name	The name of the crypto map supporting this ENodeB association.
MME UE S1AP ID	Indicate the session identifier between MME and UE on S1AP interface serving to this session.
ENodeB UE S1AP ID	Indicate the session identifier between eNodeB and UE on S1AP interface serving to this session.
UE Subscription Data	This group shows the subscribed aggregate maximum bit rate applicable for connected UE in this session.
UE-UL-AMBR	The subscribed aggregate maximum bit rate in bits per second in upload traffic for connected UE in this session.
UE-DL-AMBR	The subscribed aggregate maximum bit rate in bits per second in download traffic for connected UE in this session.
Enforced UE-UL-AMBR at eNodeB	The enforced aggregate maximum bit rate in bits per second in upload traffic for connected UE at eNodeB in this session.

Field	Description
Enforced UE-DL-AMBR at eNodeB	The enforced aggregate maximum bitrate in bits per second in download traffic for connected UE at eNodeB in this session.
PDN Information	This group shows the information of PDNs connected for this session.
APN Name	The APN name which is serving for this PDN in this session.
APN Restriction	The total number of APN restriction applied to this PDN.
PDN Type	The type of PDN (IPv4 and/or IPv6) which is serving in this session for PDN.
PGW Address	The IP address of the P-GW which is serving this session for connected PDN.
PGW control TEID	The control tunnel end identifier at P-GW on S5/S8 interface for control messaging serving to this session.
UE IPv4 Address	The IP address allocated to UE while connected to PDN in this session.
APN-UL-AMBR	The applicable aggregate maximum bit rate in bits per second in upload traffic for APN serving this PDN.
APN-DL-AMBR	The applicable aggregate maximum bit rate in bits per second in download traffic for APN serving this PDN.
Bearer Suspension State	The current suspension state of the bearer.
Bearer Id	The identifier used for bearer between eNodeB and S-GW while connected to PDN in this session.
QCI	The quality class identifier applicable for this MME session.
AMBR	The applicable aggregate maximum bit rate in bits per second in download/upload direction for APN serving this PDN.
S1U eNodeB TEID	Indicate the tunnel end identifier at eNodeB on S1-U interface serving to this session.
S1U SGW TEID	Indicate the tunnel end identifier at S-GW on S1-U interface serving to this session.
S5S8 PGW TEID	Indicate the tunnel end identifier at P-GW on S5/S8 interface serving to this session.
S1U eNodeB IPv4 Addr	Indicate the IPv4 address used at eNodeB while connecting to S-GW on S1-U interface serving to this session.
S1U eNodeB IPv6 Addr	Indicate the IPv6 address used at eNodeB while connecting to S-GW on S1-U interface serving to this session.
S1U SGW IPv4 Addr	Indicate the IPv4 address used at S-GW while connecting to eNodeB on S1-U interface serving to this session.
S1U SGW IPv6 Addr	Indicate the IPv6 address used at S-GW while connecting to eNodeB on S1-U interface serving to this session.
S5S8 PGW Addr	Indicate the IP address used at P-GW while connecting to S-GW on S5/S8 interface serving to this session.
ESM State	The EPS session Management status serving to this session.
Bearer Type	The type of bearer used for this session. Possible values are: • Default • Dedicated

Field	Description
ARP	The Allocation Retention Priority value assigned to the bearer. The HSS assigns the value for default bearers and the P-GW assigns it for dedicated bearers.
Total PDNs	The total number of PDNs connected through this session for a subscriber.
Total Bearers	The total number of bearers created for UE to use in this session.
Max APN Restrictions	The maximum number of APN restrictions applied to this PDN.
Tracking Area Information	This group displays the tracking area information available for this session.
TAI of last TAU	The tracking area identifier used in last Tracking Area Update (TAU) message received for TAU procedure in this session.
Current Tracking Area List	The tracking area list used for TAU procedure in this session.
Operator Policy Association	The operator policy associated with this PDN.
CSFB Information	This group displays the Circuit-Switched Fall Back configuration associated with the session.
SGS Assoc State	The state of the SGS association with the VLR for the UE as determined by the MME. Possible states are: • SGS-NULL: Specifies that there is no SGS association with the VLR for the UE. In this state, no fields in this group will display information. • LA_UPDATE_REQUESTED: Specifies that the MME has requested an update location from the VLR before sending a response to the UE • SGS-ASSOCIATED: Specifies that the MME has stored an SGS association for the UE.
SGS Service	The name of the configured SGS service associated with the session.
VLR	The name of the VLR, as configured in the SGS service, associated with the session.
LAI	The Location Area Identifier to which the UE is mapped.
Pool Area	The name of the configured Location Area Code (LAC) pool area associated with the SGS service and the session.
P-TMSI	The Packet-Temporary Mobile Subscriber Identifier allocated by the MSC for the UE.
Flags	The current active variables associated with the UE. Possible states are: • SMS-Only: Specifies that the UE is combined attached for SMS services only. • MME Reset Indicator: Specifies that the MME has restarted after a failure. • VLR Reliable Indicator: Specifies that the MME has received a reset indication from the VLR. • VLR Offload: Specifies that the UE is set to offload state. • Non-EPS Alert: Specifies that the VLR is requesting from the MME an indication when any signaling activity from the UE is detected.

show mme-service session summary

Table 325. show mme-service session summary Command Output Descriptions

Field	Description
Total connected sessions	The total number of MME sessions in ECM-CONNECTED mode.
Total idle-mode sessions	The total number of MME sessions in ECM-IDLE mode.
Total attached sessions	The total number of sessions attached to this MME.
Total connected PDNs	The total number of PDNs associated with UEs in ECM-CONNECTED mode.
Total idle-mode PDNs	The total number of PDNs associated with UEs in ECM-IDLE mode.
Total attached PDNs	The total number of PDNs present in this MME.
Total IPv4 PDNs	The total number of PDNs with IPv4 addresses.
Total IPv6 PDNs	The total number of PDNs with IPv6 addresses.
Total IPv4+IPv6 PDNs	The total number of PDNs with dual addressing.
Total connected dedicated bearers	The total number of dedicated bearers associated with UEs in ECM-CONNECTED mode.
Total idle-mode dedicated bearers	The total number of dedicated bearers associated with UEs in ECM-IDLE mode.
Total attached dedicated bearers	The total number of dedicated bearers present in this MME.
Total combined-attached subscribers	The total number of MME sessions which are both PS and CS attached.
Total EPS-only attached subscribers	The total number of MME sessions which are PS attached only.
Total ISR-activated sessions	The total number of MME sessions which are activated for ISR.

show mme-service statistics

Table 326. show mme-service statistics Output Descriptions

Field	Description
SCTP Statistics	
Transmitted SCTP Data	This sub-group displays the statistics of the total data processed and transmitted over Stream Control Transmission Protocol (SCTP) interface by this MME manager.
Init Chunks	The total SCTP packets with INIT transmitted over SCTP interface by this MME manager.
Init Ack Chunks	The total SCTP packets with INIT-ACK transmitted over SCTP interface by this MME manager.
Shutdown Chunks	The total SCTP packets with SHUTDOWN transmitted over SCTP interface by this MME manager.
Shutdown Ack Chunks	The total SCTP packets with SHUTDOWN-ACK transmitted over SCTP interface by this MME manager.
Cookie Chunks	The total SCTP packets with COOKIE transmitted over SCTP interface by this MME manager.
Cookie Ack Chunks	The total SCTP packets with COOKIE-ACK transmitted over SCTP interface by this MME manager.
Data Chunks	The total SCTP packets with DATA transmitted over SCTP interface by this MME manager.
Data Ack Chunks	The total SCTP packets with DATA-ACK transmitted over SCTP interface by this MME manager.
Shutdown Complete Chunks	The total SCTP packets with SHUTDOWN-COMPLETE transmitted over SCTP interface by this MME manager.
Heartbeat Chunks	The total SCTP packets with HEARTBEAT transmitted over SCTP interface by this MME manager.
HeartBeat Ack Chunks	The total SCTP packets with HEARTBEAT-ACK transmitted over SCTP interface by this MME manager.
Abort Chunks	The total SCTP packets with ABORT transmitted over SCTP interface by this MME manager.
Error Chunks	The total SCTP packets with ERROR transmitted over SCTP interface by this MME manager.
Received SCTP Data	This sub-group displays the statistics of the total data received over SCTP interface and processed by this MME manager.
Init Chunks	The total SCTP packets with INIT received over SCTP interface by this MME manager.
Init Ack Chunks	The total SCTP packets with INIT-ACK received over SCTP interface by this MME manager.
Shutdown Chunks	The total SCTP packets with SHUTDOWN received over SCTP interface by this MME manager.
Shutdown Ack Chunks	The total SCTP packets with SHUTDOWN-ACK received over SCTP interface by this MME manager.
Cookie Chunks	The total SCTP packets with COOKIE received over SCTP interface by this MME manager.
Cookie Ack Chunks	The total SCTP packets with COOKIE-ACK received over SCTP interface by this MME manager.

Field	Description
Data Chunks	The total SCTP packets with DATA received over SCTP interface by this MME manager.
Data Ack Chunks	The total SCTP packets with DATA-ACK received over SCTP interface by this MME manager.
Shutdown Complete Chunks	The total SCTP packets with SHUTDOWN-COMplete received over SCTP interface by this MME manager.
Heartbeat Chunks	The total SCTP packets with HEARTBEAT received over SCTP interface by this MME manager.
HeartBeat Ack Chunks	The total SCTP packets with HEARTBEAT-ACK received over SCTP interface by this MME manager.
Abort Chunks	The total SCTP packets with ABORT received over SCTP interface by this MME manager.
Error Chunks	The total SCTP packets with ERROR received over SCTP interface by this MME manager.
Retransmitted SCTP Data	This sub-group displays the statistics of the total data processed and retransmitted over SCTP interface by this MME manager.
Init Chunks	The total SCTP packets with INIT retransmitted over SCTP interface by this MME manager.
Shutdown Chunks	The total SCTP packets with SHUTDOWN retransmitted over SCTP interface by this MME manager.
Shutdown Ack Chunks	The total SCTP packets with SHUTDOWN-ACK retransmitted over SCTP interface by this MME manager.
Cookie Chunks	The total SCTP packets with COOKIE retransmitted over SCTP interface by this MME manager.
Data Chunks	The total SCTP packets with DATA transmitted over SCTP interface by this MME manager.
Total Bytes Sent	The total bytes processed and sent over SCTP interface by this MME manager.
Total Bytes Received	The total bytes received over SCTP interface by this MME manager for processing.
Total Packets Sent	The total packets processed and sent over SCTP interface by this MME manager.
Total Packets Received	The total packets received over SCTP interface by this MME manager for processing.
S1AP Statistics	
Transmitted S1AP Data	This sub-group displays the statistics of the total data processed and transmitted over S1 Application Protocol (S1AP) interface by this MME manager to eNodeB.
S1 Setup Resp	The total number of S1 SETUP RESPONSE messages for S1 setup procedure processed and transmitted over S1AP interface by this MME manager to eNodeB.
S1 Setup Fail	The total number of S1 SETUP FAILURE messages for S1 setup procedure processed and transmitted over S1AP interface by this MME manager to eNodeB.
Reset	The total number of S1 RESET messages for S1 reset procedure processed and transmitted over S1AP interface by this MME manager to eNodeB.
Reset Ack	The total number of S1 RESET-ACK messages for S1 reset procedure processed and transmitted over S1AP interface by this MME manager to eNodeB.
Overload Start	The total number of OVERLOAD-START messages for S1 overload start procedure processed and transmitted over S1AP interface by this MME manager to eNodeB.
Overload Stop	The total number of OVERLOAD-START messages for S1 overload start procedure processed and transmitted over S1AP interface by this MME manager to eNodeB.

Field	Description
MME Dir Information Transfer	The total number of MME DIRECT INFORMATION TRANSFER messages for MME Direct Information Transfer procedure processed and transmitted over S1 AP interface by this MME manager to eNodeB.
Paging	The total number of PAGING messages for paging procedure processed and transmitted over S1 AP interface by this MME manager to eNodeB.
eNB Config Update Ack	The total number of ENB CONFIGURATION UPDATE ACK messages for eNodeB Configuration Update procedure processed and transmitted over S1 AP interface by this MME manager to eNodeB.
eNB Config Update Fail	The total number of ENB CONFIGURATION UPDATE FAILURE messages for eNB Configuration Update procedure processed and transmitted over S1 AP interface by this MME manager to eNodeB.
S1 AP Msg Encode Fail	The total number of failure occurred during S1 AP encode procedure and S1 AP ENCODE FAILURE messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
E-RAB Setup Req	The total number of E-RAB setup request messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
E-RAB Modify Req	The total number of E-RAB modify request messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
E-RAB Release Command	The total number of E-RAB release request messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
Initial Ctxt Setup Req	The total number of initial context setup request messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
UE Ctxt Release Command	The total number of initial UE context release command messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
UE Context Modify Req	The total number of UE context modify request messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
Downlink NAS Transport	The total number of NAS Transport in downlink messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
Error Ind	The total number of S1 AP messages with error-indication processed and transmitted over S1 AP interface by this MME manager to eNodeB.
Handover Command	The total number of S1 AP messages with handover command processed and transmitted over S1 AP interface by this MME manager to eNodeB.
Handover Prep Fail	The total number of S1 AP messages generated for handover preparation failure procedure and transmitted over S1 AP interface by this MME manager to eNodeB.
Handover Request	The total number of S1 AP messages with handover request processed and transmitted over S1 AP interface by this MME manager to eNodeB.
Handover Cancel Ack	The total number of HANDOVER_CANCEL_ACK messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
Path Switch Request Ack	The total number of PATH_SWITCH_REQ_ACK messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.

Field	Description
Path Switch Request Fail	The total number of PATH_SWITCH_REQ_FAIL messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
Downlink S1 CDMA2000	The total number of CDMA2000 request messages processed and transmitted over S1 AP interface by S1 tunneling to interact with cdma2000 network in downlink direction by this MME manager to eNodeB.
Trace Start	The total number of messages processed and transmitted over S1 AP interface to indicate that Session Trace started for specific session by this MME manager to eNodeB.
Deactivate Trace	The total number of messages processed and transmitted over S1 AP interface to indicate that Session Trace deactivated for specific session by this MME manager to eNodeB.
MME Status Transfer	The total number of messages processed and transmitted over S1 AP interface to indicate the MME status by this MME manager to eNodeB.
Loc Report Control	The total number of LOCATION REPORT CONTROL messages sent by the MME to the eNodeB requesting the current location of the UE.
MME Config Update	The total number of MME CONFIGURATION UPDATE messages sent by the MME to the eNodeB for the purpose of updating the Transport Network Layer (TNL) association. The TNL association is required for the MME and eNodeB to interoperate correctly across the S1 interface.
S1 AP Encode Failure	The total number of failure occurred during S1 AP encode procedure and S1 AP ENCODE FAILURE messages processed and transmitted over S1 AP interface by this MME manager to eNodeB.
MME Config Transfer	The total number of MME CONFIGURATION TRANSFER messages sent by the MME to the eNodeB for the purpose of transferring RAN configuration information.
Received S1 AP Data	This sub-group displays the statistics of the total data received over S1 AP interface by this MME manager from eNodeB.
S1 Setup Req	The total number of S1 SETUP REQUEST messages for S1 setup procedure received over S1 AP interface by this MME manager from eNodeB.
Reset	The total number of S1 RESET messages for S1 reset procedure received over S1 AP interface by this MME manager from eNodeB.
Reset Ack	The total number of S1 RESET-ACK messages for S1 reset procedure received over S1-P interface by this MME manager from eNodeB.
eNB Dir Info Transfer	The total number of ENB DIRECT INFORMATION TRANSFER messages for eNodeB Direct Information Transfer procedure processed and transmitted over S1 AP interface by this MME manager to eNodeB.
eNB Config Update	The total number of ENB CONFIGURATION UPDATE messages for eNB Configuration Update procedure processed and transmitted over S1 AP interface by this MME manager to eNodeB.
S1 AP Msg Decode Failure	The total number of failure occurred during S1 AP control message decoding procedure by eNodeB and S1 AP DECODE FAILURE messages received over S1 AP interface by this MME manager from eNodeB.
S1 AP Msg Unexpected	The total number of failure occurred due to unexpected events during S1 AP control message procedure at eNodeB and S1 AP UNEXPECTED EVENT messages received over S1 AP interface by this MME manager from eNodeB.
E-RAB Setup Resp	The total number of E-RAB setup request response messages received over S1 AP interface by this MME manager from eNodeB.

Field	Description
E-RAB Modify Resp	The total number of E-RAB modify request response messages received over S1 AP interface by this MME manager from eNodeB.
E-RAB Release Resp	The total number of E-RAB release request response messages received over S1 AP interface by this MME manager from eNodeB.
E-RAB Release Ind	The total number of E-RAB release indicator messages received over S1 AP interface by this MME manager from eNodeB.
Initial Ctxt Setup Resp	The total number of initial context setup request response messages received over S1 AP interface by this MME manager from eNodeB.
Initial Ctxt Setup Fail	The total number of initial UE context setup failure messages received over S1 AP interface by this MME manager from eNodeB.
UE Ctxt Release Req	The total number of initial UE context release command messages received over S1 AP interface by this MME manager from eNodeB.
UE Ctxt Release Comp	The total number of UE context release request messages received over S1 AP interface by this MME manager from eNodeB.
UE Context Modify Resp	The total number of UE context modify request messages received over S1 AP interface by this MME manager from eNodeB.
UE Ctxt Modify Fail	The total number of UE context modify request failure messages received over S1 AP interface by this MME manager from eNodeB.
Initial UE Message	The total number of initial UE messages received over S1 AP interface by this MME manager from eNodeB.
Uplink NAS Transport	The total number of NAS Transport in Uplink direction messages received over S1 AP interface by this MME manager from eNodeB.
NAS Non-Delivery Ind	The total number of S1 AP messages for NAS non delivery indication received over S1 AP interface by this MME manager from eNodeB.
Error Indication	The total number of S1 AP messages with error-indication received over S1 AP interface by this MME manager from eNodeB.
Handover Request Ack	The total number of ACK messages for handover request received over S1 AP interface by this MME manager from eNodeB.
Handover Cancel	The total number of handover cancel messages received over S1 AP interface by this MME manager from eNodeB.
Handover Required	The total number of handover required messages received over S1 AP interface by this MME manager from eNodeB.
Handover Fail	The total number of HANDOVER_FAILURE messages received over S1 AP interface by this MME manager from eNodeB.
Handover Notify	The total number of HANDOVER_NOTIFY messages received over S1 AP interface by this MME manager from eNodeB.
Path Switch Req	The total number of PATH_SWITCH_REQ messages received over S1 AP interface by this MME manager from eNodeB.
eNB Status Transfer	The total number of messages received for eNodeB status transfer message over S1 AP interface by this MME manager from eNodeB.

Field	Description
UE Capability Info Ind	The total number of messages with UE capability information indication received over S1 AP interface by this MME manager from eNodeB.
Uplink S1 CDMA2000	The total number of response messages for S1 tunneling with cdma2000 network in uplink direction received over S1 AP interface by this MME manager from eNodeB.
Trace Failure Ind	The total number of response messages with Session Trace failure indication for specific session received over S1 AP interface by this MME manager from eNodeB.
Location Report	The total number of LOCATION REPORT messages sent by the eNodeB to the MME providing the UE's location.
Loc Report Fail Ind	The total number of LOCATION REPORT FAILURE INDICATION messages sent by the eNodeB to the MME indicating that a LOCATION REPORT CONTROL procedure has failed due to an interaction with a handover procedure.
S1 AP Decode Fail	The total number of response message indicating S1 AP decode failure received over S1 AP interface by this MME manager from eNodeB.
MME Config Update Fail	The total number of MME CONFIGURATION UPDATE FAILURE messages sent by the eNodeB to the MME indicating an S1-MME configuration update failure.
MME Config Update Ack	The total number of MME CONFIGURATION UPDATE ACKNOWLEDGEMENT messages sent by the eNodeB indicating the receipt of the Transport Network Layer (TNL) association information.
S1 AP Unexpected Event	The total number of message indicating failure due to unexpected event received over S1 AP interface by this MME manager from eNodeB.
eNB Config Transfer	The total number of ENB CONFIGURATION TRANSFER message received by the MME from the eNodeB for the purpose of transferring RAN configuration information.
Radio Network Error Statistics	This sub-group displays error indication statistics between the MME and the eNodeB.
Unknown MME UE S1 AP Id	The total number of times an MME UE S1 AP ID was not included in an error indication message received by the MME from the eNodeB.
Unknown ENB UE S1 AP Id	The total number of times an ENB UE S1 AP ID was not included in an error indication message received by the MME from the eNodeB.
Unknown UE S1 AP Id Pair	The total number of times an ENB and MME UE S1 AP ID was not included in an error indication message received by the MME from the eNodeB.
Protocol Error Statistics	This sub-group displays protocol error statistics for S1 AP messages received by the MME.
Transfer Syntax Error	The total number of messages received by the MME from the eNodeB containing a Transfer Syntax Error.
Semantic Error	The total number of messages received by the MME from the eNodeB containing a Semantic Error.
Message Not Compatible	The total number of messages received by the MME from the eNodeB that were not compatible with the receiver state.
Abstract Syntax Error	This sub-group displays abstract syntax error statistics for S1 AP messages received by the MME from the eNodeB.
Reject	The total number of S1 AP messages received by the MME from the eNodeB containing an Abstract Syntax Error with a criticality of "reject".

Field	Description
Ignore And Notify	The total number of S1 AP messages received by the MME from the eNodeB containing an Abstract Syntax Error with a criticality of "ignore and notify".
Falsely Constr Msg	The total number of S1 AP messages received by the MME from the eNodeB containing an Abstract Syntax Error because the message contained IEs or IE groups in the wrong order or with too many occurrences.
eNodeB Statistics	This sub-group displays eNodeB statistics for S1 AP messages received by the MME from the eNodeB.
Total eNodeB Associations	The total number of eNodeB associations
EMM (Evolved Mobility Management) Statistics	
EPS Associations by Attach using IMSI	This sub-group displays all EMM Evolved Packet System (EPS) IMSI attach association attempts/successes/failures associated with all MME services on the chassis.
EPS Associations by Attach using Local GUTI	This sub-group displays all EMM EPS local GUTI (Globally Unique Temporary ID) attach association attempts/successes/failures associated with all MME services on the chassis.
EPS Associations by Attach using Local GUTI	This sub-group displays all EMM EPS local GUTI attach association attempts/successes/failures associated with all MME services on the chassis.
EPS Associations by Attach using Foreign GUTI	This sub-group displays all EMM EPS foreign GUTI attach association attempts/successes/failures associated with all MME services on the chassis.
EPS Associations by Attach using P-TMSI	This sub-group displays all EMM EPS P-TMSI (Packet Temporary Mobile Subscriber Identity) attach association attempts/successes/failures associated with all MME services on the chassis.
EPS Associations by TAU using Foreign GUTI	This sub-group displays all EMM EPS foreign GUTI tracking area update association attempts/successes/failures associated with all MME services on the chassis.
EPS Associations by TAU using P-TMSI	This sub-group displays all EMM EPS P-TMSI tracking area update association attempts/successes/failures associated with all MME services on the chassis.
Associations by Combined Attach using IMSI	This sub-group displays all EMM EPS IMSI combined attach association attempts, successes, EPS Only successes, and failures associated with all MME services on the chassis. "Success EPS Only" shows when a UE has requested a Combined Attach/TAU but the MME sent a Successful EPS-ONLY result, such as when the UE requests a Combined Attach but the SGs interface is down and the MME sent back an Attach Accept but with EPS-ONLY.
Associations by Combined Attach using Local GUTI	This sub-group displays all EMM EPS local GUTI combined attach association attempts, successes, EPS Only successes, and failures associated with all MME services on the chassis. "Success EPS Only" shows when a UE has requested a Combined Attach/TAU but the MME sent a Successful EPS-ONLY result, such as when the UE requests a Combined Attach but the SGs interface is down and the MME sent back an Attach Accept but with EPS-ONLY.
Associations by Combined Attach using Foreign GUTI	This sub-group displays all EMM EPS foreign GUTI combined attach association attempts, successes, EPS Only successes, and failures associated with all MME services on the chassis. "Success EPS Only" shows when a UE has requested a Combined Attach/TAU but the MME sent a Successful EPS-ONLY result, such as when the UE requests a Combined Attach but the SGs interface is down and the MME sent back an Attach Accept but with EPS-ONLY.

Field	Description
Associations by Combined Attach using P-TMSI	This sub-group displays all EMM EPS P-TMSI combined attach association attempts, successes, EPS Only successes, and failures associated with all MME services on the chassis. "Success EPS Only" shows when a UE has requested a Combined Attach/TAU but the MME sent a Successful EPS-ONLY result, such as when the UE requests a Combined Attach but the SGs interface is down and the MME sent back an Attach Accept but with EPS-ONLY.
Associations by Combined TAU using Foreign GUTI	This sub-group displays all EMM EPS foreign GUTI combined tracking area update association attempts, successes, EPS Only successes, and failures associated with all MME services on the chassis. "Success EPS Only" shows when a UE has requested a Combined Attach/TAU but the MME sent a Successful EPS-ONLY result, such as when the UE requests a Combined Attach but the SGs interface is down and the MME sent back an Attach Accept but with EPS-ONLY.
Associations by Combined TAU using P-TMSI	This sub-group displays all EMM EPS P-TMSI combined tracking area update association attempts, successes, EPS Only successes, and failures associated with all MME services on the chassis. "Success EPS Only" shows when a UE has requested a Combined Attach/TAU but the MME sent a Successful EPS-ONLY result, such as when the UE requests a Combined Attach but the SGs interface is down and the MME sent back an Attach Accept but with EPS-ONLY.
Authentications	This sub-group displays all EMM authentication attempts/successes/failures associated with all MME services on the system.
Identity	This sub-group displays all EMM identity event attempts/successes/failures associated with all MME services on the system.
GUTI Relocation	This sub-group displays all GUTI relocation event attempts/successes/failures associated with all MME services on the system.
Security	This sub-group displays all EMM security event attempts/successes/failures associated with all MME services on the system.
Periodic TAU	This sub-group displays all periodic tracking area update (TAU) attempts/successes/failures associated with all MME services on the system.
Normal TAU without SGW Relocation	This sub-group displays all EMM normal tracking area update, without S-GW relocation, attempts/successes/failures associated with all MME services on the chassis.
TAU with Bearer Activation	This sub-group displays all EMM tracking area update, with bearer activation, attempts/successes/failures associated with all MME services on the chassis.
TAU with SGW Relocation	This sub-group displays all EMM tracking area update, with S-GW relocation, attempts/successes/failures associated with all MME services on the chassis.
Detaches UE Initiated	This sub-group displays all UE-initiated detach attempts/successes/failures associated with all MME services on the system.
Detaches NW Initiated	This sub-group displays all network-initiated detach attempts/successes/failures associated with all MME services on the system.
Detaches HSS Initiated	This sub-group displays all HSS-initiated (Home Subscriber Server) detach attempts/successes/failures associated with all MME services on the system.
Attempted	The total number of attempts made for specific EMM event associated with all MME services on the system.
Success	The total number of successful attempts for specific EMM event associated with all MME services on the system.

Field	Description
Success EPS Only	The total number of successful, EPS-only, attempts for specific EMM event associated with all MME services on the system.
Failures	The total number of attempts failed for specific EMM event associated with all MME services on the system.
ECM Statistics	This group displays the statistics of all EMM Control Management (ECM) events associated with all MME services on the system.
Idle Mode Entry Events	This sub-group displays all idle mode entry event attempts/successes/ failures associated with all MME services on the system.
Attempted	The total number of attempts made for the specific ECM event associated with all MME services on the system.
Success	The total number of successful attempts for the specific ECM event associated with all MME services on the system.
Failures	The total number of attempts failed for the specific ECM event associated with all MME services on the system.
Service Request Events	This sub-group displays the ECM service request event attempts/successes/ failures associated with all MME services on the system.  Important: In Release 14.0 and later, this group of counters is deprecated and replaced by the UE Requested Service Request Events and NW Initiated Service Request Events groups.
Paging Initiation Events	This sub-group displays all paging initiation event attempts/successes/ failures associated with all MME services on the system.
Attempted	The total number of attempts made for the specific ECM event associated with all MME services on the system.
Success	The total number of successful attempts for the specific ECM event associated with all MME services on the system.
Failures	The total number of attempts failed for the specific ECM event associated with all MME services on the system.
Success at Last eNBs	The total number of successful pages where the UE responded at the last known eNodeB.  Important: In Release 14.0 and later, this output field has been replaced by the following “Success at Last n eNBs” output field.
Success at Last TAI	The total number of successful pages where the UE responded at the last known Tracking Area Identifier.
Success at TAI List	The total number of successful pages where the UE responded after the entire TAI list was checked.
S1 release for load rebalancing	The number of S1 releases occurring due to IDLE MODE ENTRY procedure with a load rebalancing cause.
Total EMM Control Messages	

Field	Description
Sent	This sub-group displays the total number of EMM control messages sent for specific ECM event associated with all MME services on the system.
Clear-text messages	The total number of EMM control messages sent with “Clear Text” for specific ECM event associated with all MME services on the system.
Integrity-check enabled	The total number of EMM control messages sent with “Integrity-Check Enabled” flag for specific ECM event associated with all MME services on the system.
Ciphered messages	The total number of EMM control messages sent with “Ciphered” flag for specific ECM event associated with all MME services on the system.
Retransmissions sent	The total number of EMM control messages retransmitted for specific ECM event associated with all MME services on the system.
Failures	The total number of EMM control messages failed for specific ECM event associated with all MME services on the system.
Attach Accept	The total number of EMM Attach Accept messages sent for a specific ECM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted EMM Attach Accept messages sent for a specific ECM event associated with all MME services on the system.
Attach Reject	The total number of EMM Attach Reject messages sent for a specific ECM event associated with all MME services on the system.
IMSI Unknown in HSS	The total number of EMM Attach Reject messages sent, with the cause “IMSI Unknown in HSS” for a specific ECM event associated with all MME services on the system.
Illegal UE	The total number of EMM Attach Reject messages sent with the cause “Illegal UE” for a specific ECM event associated with all MME services on the system.
Illegal ME	The total number of EMM Attach Reject messages sent with the cause “Illegal ME” for a specific ECM event associated with all MME services on the system.
EPS Not Allowed	The total number of EMM Attach Reject messages sent with the cause “EPS Not Allowed” for a specific ECM event associated with all MME services on the system.
Network Failure	The total number of EMM Attach Reject messages sent with the cause “Network Failure” for a specific ECM event associated with all MME services on the system.
ESM Failure	The total number of EMM Attach Reject messages sent, with the cause “ESM Failure” for a specific ECM event associated with all MME services on the system.
Decode Failure	The total number of EMM Attach Reject messages sent with the cause “Decode Failure” for a specific ECM event associated with all MME services on the system.
EPS and non EPS Not Allowed	The total number of EMM Attach Reject messages sent with the cause “EPS service disallowed” for a specific ECM event associated with all MME services on the system.
EPS Not allowed in this PLMN	The total number of EMM Attach Reject messages sent with the cause “EPS service not allowed in this plmn” for a specific ECM event associated with all MME services on the system.
Authentication Reject	The total number of EMM Attach Reject messages sent with the cause “Authentication Reject” for a specific ECM event associated with all MME services on the system.
Authentication Request	The total number of EMM Authentication Request messages sent for a specific ECM event associated with all MME services on the system.

Field	Description
Retransmissions	The total number of retransmitted EMM Authentication Request messages sent for a specific ECM event associated with all MME services on the system.
Detach Request	The total number of EMM Detach Request messages sent for a specific ECM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted EMM Detach Request messages sent for a specific ECM event associated with all MME services on the system.
Reattach Required	The total number of EMM Detach Request messages sent, with the reason “Reattach Required”, for a specific ECM event associated with all MME services on the system.
Reattach Not Required	The total number of EMM Detach Request messages sent, with the reason “Reattach Not Required”, for a specific ECM event associated with all MME services on the system.
CSG Not Subscribed	The total number of EMM Detach Request messages sent with the cause “Not authorized for this CSG”. This occurs when the Initial UE Message sent from the eNodeB specifies a non-hybrid CSG cell whose CSG ID is not included in the UE’s CSG subscription list. In this circumstance, the MME initiates a Detach procedure with this cause code.
IMSI Detach	The total number of EMM Detach Request messages sent, with the reason “IMSI Detach”, for a specific ECM event associated with all MME services on the system.  Important: This statistic has been deprecated in Release 12.2.
Detach Accept	The total number of EMM Detach Accept messages sent for a specific ECM event associated with all MME services on the system.
Downlink NAS Transport	The total number of EMM Downlink NAS Transport messages sent for a specific ECM event associated with all MME services on the system.
EMM Information	The total number of EMM Information messages sent for a specific ECM event associated with all MME services on the system.
EMM Status	The total number of EMM Status messages sent for a specific ECM event associated with all MME services on the system.
GUTI Relocation	The total number of EMM GUTI Relocation messages sent for a specific ECM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted EMM GUTI Relocation messages sent for a specific ECM event associated with all MME services on the system.
Identity Request	The total number of EMM Identity Request messages sent for a specific ECM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted EMM Identity Request messages sent for a specific ECM event associated with all MME services on the system.
Security Mode Command	The total number of EMM Security Mode Command messages sent for a specific ECM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted EMM Security Mode Command messages sent for a specific ECM event associated with all MME services on the system.

Field	Description
Service Reject	The total number of EMM Service Reject messages sent for a specific ECM event associated with all MME services on the system.
UE Identity Unknown	The total number of EMM Service Reject messages sent, with the cause “UE Identity Unknown”, for a specific ECM event associated with all MME services on the system.
Implicitly Detached	The total number of EMM Service Reject messages sent, with the cause “Implicitly Detached”, for a specific ECM event associated with all MME services on the system.
CSG Not Subscribed	The total number of EMM Service Reject messages sent with the cause “Not authorized for this CSG”.
TAU Accept	The total number of EMM TAU Accept messages sent for a specific ECM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted EMM TAU Accept messages sent for a specific ECM event associated with all MME services on the system.
TAU Reject	The total number of EMM TAU Reject messages sent for a specific ECM event associated with all MME services on the system.
IMSI Unknown in HSS	The total number of EMM TAU Reject messages sent with the cause “IMSI Unknown in HSS” for a specific ECM event associated with all MME services on the system.
Illegal UE	The total number of EMM TAU Reject messages sent with the cause “Illegal UE” for a specific ECM event associated with all MME services on the system.
Illegal ME	The total number of EMM TAU Reject messages sent with the cause “Illegal ME” for a specific ECM event associated with all MME services on the system.
EPS Not Allowed	The total number of EMM TAU Reject messages sent with the cause “EPS Not Allowed” for a specific ECM event associated with all MME services on the system.
Network Failure	The total number of EMM TAU Reject messages sent with the cause “Network Failure” for a specific ECM event associated with all MME services on the system.
IMEI not accepted	The total number of EMM TAU Reject messages sent with the cause “IMEI Not Accepted” for a specific ECM event associated with all MME services on the system.
ESM Failure	The total number of EMM TAU Reject messages sent with the cause “ESM Failure” for a specific ECM event associated with all MME services on the system.  Important: This statistic has been deprecated in Release 12.2.
Decode Failure	The total number of EMM TAU Reject messages sent with the cause “Decode Failure” for a specific ECM event associated with all MME services on the system.
No Bearer Active	The total number of EMM TAU Reject messages sent with the cause “No Bearer Active” for a specific ECM event associated with all MME services on the system.
UE Identity Unknown	The total number of EMM TAU Reject messages sent with the cause “UE Identity Unknown” for a specific ECM event associated with all MME services on the system.
Implicitly Detached	The total number of EMM TAU Reject messages sent with the cause “Implicitly Detached” for a specific ECM event associated with all MME services on the system.

Field	Description
Roaming Restricted TA	The total number of EMM TAU Reject messages sent with the cause “Roaming restricted in TA” for a specific ECM event associated with all MME services on the system.
No EPS Svc in PLMN	The total number of EMM TAU Reject messages sent with the cause “EPS service not allowed in this plmn” for a specific ECM event associated with all MME services on the system.
CSG Not Subscribed	The total number of EMM TAU Reject messages sent with the cause “Not authorized for this CSG”.
CS Service Notification	The total number of EMM TAU Reject messages sent with the cause “CS Service Notification” for a specific ECM event associated with all MME services on the system.
Received	This sub-group The total number of EMM control messages received for specific ECM event associated with all MME services on the system.
Clear-text messages	The total number of EMM control messages received with a “Clear Text” message for a specific ECM event associated with all MME services on the system.
Integrity-check enabled	The total number of EMM control messages received with “Integrity-Check Enabled” flag for specific ECM event associated with all MME services on the system.
Ciphered messages	The total number of EMM control messages received with “Ciphered” flag for specific ECM event associated with all MME services on the system.
Accepted	The total number of EMM control messages received and accepted for specific ECM event associated with all MME services on the system.
Ignored messages	The total number of EMM control messages received and ignored for specific ECM event associated with all MME services on the system.
Denied	The total number of EMM control messages received and denied by peer for specific ECM event associated with all MME services on the system.
Decode failures	The total number of EMM control messages received with “Decode-Failure” reason for specific ECM event associated with all MME services on the system.
Attach Complete	The total number of EMM Attach Complete messages received for a specific ECM event associated with all MME services on the system.
Attach Request	The total number of EMM Attach Request messages received for a specific ECM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted EMM Attach Request messages received for a specific ECM event associated with all MME services on the system.  Important: This field is deprecated in Release 14.0.
Authentication Failure	The total number of EMM Authentication Failure messages received for a specific ECM event associated with all MME services on the system.
Authentication Response	The total number of EMM Authentication Response messages received for a specific ECM event associated with all MME services on the system.
Identity Response	The total number of IMSI Identity Response messages received for a specific ECM event associated with all MME services on the system.

Field	Description
Detach Request	The total number of EMM Detach Request messages received for a specific ECM event associated with all MME services on the system.
Switch Off	The total number of EMM Detach Request messages received, with the reason “Switch Off”, for a specific ECM event associated with all MME services on the system.
Not Switch Off	The total number of EMM Detach Request messages received, with the reason “Not Switch Off”, for a specific ECM event associated with all MME services on the system.
IMSI Detach	The total number of EMM Detach Request messages received, with the reason “IMSI Detach”, for a specific ECM event associated with all MME services on the system.
EMM Status	The total number of EMM Status messages received for a specific ECM event associated with all MME services on the system.
GUTI Reloc Complete	The total number of EMM GUTI Reloc Complete messages received for a specific ECM event associated with all MME services on the system.
Security Mode Complete	The total number of EMM Security Mode Complete messages received for a specific ECM event associated with all MME services on the system.
Security Mode Reject	The total number of EMM Security Mode Reject messages received for a specific ECM event associated with all MME services on the system.
Service Request	The total number of EMM Service Request messages received for a specific ECM event associated with all MME services on the system.
TAU Request	The total number of EMM TAU Request messages received for a specific ECM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted EMM TAU Request messages received for a specific ECM event associated with all MME services on the system.  Important: This field is deprecated in Release 14.0.
TAU Complete	The total number of EMM TAU Complete messages received for a specific ECM event associated with all MME services on the system.
Extended Service Request	The total number of EMM Extended Service Request messages received for a specific ECM event associated with all MME services on the system.
ESM (EPS Session Management) Statistics	
PDN Connections	This group displays the all statistics for PDN connection attempts/successes/failures associated with all MME services on the system.
UE Initiated PDN Disconnections	This group displays the all statistics for UE-initiated PDN disconnection attempts/successes/failures associated with all MME services on the system.
MME Initiated PDN Disconnections	This group displays the all statistics for MME-initiated PDN disconnection attempts/successes/failures associated with all MME services on the system.
PGW/SGW Initiated PDN Disconnections	This group displays the all statistics for P-GW/S-GW-initiated PDN disconnection attempts/successes/failures associated with all MME services on the system.
HSS Initiated PDN Disconnections	This group displays the all statistics for HSS-initiated PDN disconnection attempts/successes/failures associated with all MME services on the system.

Field	Description
Default Bearer Activations	This group displays the all statistics of all default EPS bearer activation attempts/successes/failures associated with all MME services on the system.
NW Initiated Dedicated Bearer Activations	This group displays the all statistics of all network-initiated dedicated EPS bearer activation attempts/successes/failures associated with all MME services on the system.
UE Initiated Dedicated Bearer Activations	This group displays the all statistics of all UE-initiated dedicated EPS bearer activation attempts/successes/failures associated with all MME services on the system.
MME Initiated Bearer Deactivations	This group displays the all statistics of all MME-initiated bearer deactivation attempts/successes/failures associated with all MME services on the system.
PGW/SGW Initiated Bearer Deactivations	This group displays the all statistics of all P-GW/S-GW-initiated bearer deactivation attempts/successes/failures associated with all MME services on the system.
UE Initiated Bearer Deactivations	This group displays the all statistics of all UE-initiated bearer deactivation attempts/successes/failures associated with all MME services on the system.
HSS Initiated Bearer Modifications	This group displays the all statistics of all HSS-initiated bearer modification attempts/successes/failures associated with all MME services on the system.
PGW/SGW Initiated Bearer Modifications	This group displays the all statistics of all P-GW/S-GW-initiated bearer modification attempts/successes/failures associated with all MME services on the system.
UE Initiated Bearer Modifications	This group displays the all statistics of all UE-initiated bearer modification attempts/successes/failures associated with all MME services on the system.
Attempted	The total number of attempts made for specific ESM event associated with all MME services on the system.
Success	The total number of successful attempts for specific ESM event associated with all MME services on the system.
Failures	The total number of attempts failed for specific ESM event associated with all MME services on the system.
Total ESM Control Messages	
Sent	This sub-group displays the statistics of all ESM control messages sent by an MME services on the system.
Clear-text messages	The total number of ESM control messages with “clear-text” flag received by all MME services on the system.
Integrity-check enabled	The total number of ESM control messages with “Integrity-Check Enabled” flag received by all MME services on the system.
Ciphered messages	The total number of ESM control messages with “Ciphered” flag received by all MME services on the system.
Retransmissions sent	The total number of ESM control messages with “retransmission-sent” flag sent by all MME services on the system.
Failures	The total number of ESM control messages with “failure” flag sent by all MME services on the system.

Field	Description
Act Dedicated Bearer	The total number of ESM Activate Dedicated Bearer messages sent for a specific ESM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted ESM Activate Dedicated Bearer messages sent for a specific ECM event associated with all MME services on the system.
Act Default Bearer	The total number of ESM Activate Default Bearer messages sent for a specific ESM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted ESM Activate Default Bearer messages sent for a specific ECM event associated with all MME services on the system.
Bearer Alloc Reject	The total number of ESM Bearer Allocate Reject messages sent for a specific ESM event associated with all MME services on the system.
PTI Already in Use	The total number of ESM Bearer Allocate Reject messages sent, with the cause “PTI Already in Use”, for a specific ESM event associated with all MME services on the system.
Semantic Error TFT	The total number of ESM Bearer Allocate Reject messages sent, with the cause “Semantic Error TFT”, for a specific ESM event associated with all MME services on the system.
Syntactic Error TFT	The total number of ESM Bearer Allocate Reject messages sent, with the cause “Syntactic Error TFT”, for a specific ESM event associated with all MME services on the system.
Invalid Bearer Id	The total number of ESM Bearer Allocate Reject messages sent, with the cause “Invalid Bearer Id”, for a specific ESM event associated with all MME services on the system.
Collision with NW Op	The total number of ESM Bearer Allocate Reject messages sent, with the cause “Collision with NW Op”, for a specific ESM event associated with all MME services on the system.
Rejected By PGW/SGW	The total number of ESM Bearer Allocate Reject messages sent, with the cause “Rejected By PGW/SGW”, for a specific ESM event associated with all MME services on the system.
Invalid PTI	The total number of ESM Bearer Allocate Reject messages sent, with the cause “Invalid PTI”, for a specific ESM event associated with all MME services on the system.
Bearer Modify Reject	The total number of ESM Bearer Modify Reject messages sent for a specific ESM event associated with all MME services on the system.
PTI Already in Use	The total number of ESM Bearer Modify Reject messages sent, with the cause “PTI Already in Use”, for a specific ESM event associated with all MME services on the system.
Semantic Error TFT	The total number of ESM Bearer Modify Reject messages sent, with the cause “Semantic Error TFT”, for a specific ESM event associated with all MME services on the system.
Syntactic Error TFT	The total number of ESM Bearer Modify Reject messages sent, with the cause “Syntactic Error TFT”, for a specific ESM event associated with all MME services on the system.
Invalid Bearer Id	The total number of ESM Bearer Modify Reject messages sent, with the cause “Invalid Bearer Id”, for a specific ESM event associated with all MME services on the system.
Collision with NW Op	The total number of ESM Bearer Modify Reject messages sent, with the cause “Collision with NW Op”, for a specific ESM event associated with all MME services on the system.
Rejected By PGW/SGW	The total number of ESM Bearer Modify Reject messages sent, with the cause “Rejected By PGW/SGW”, for a specific ESM event associated with all MME services on the system.

Field	Description
Invalid PTI	The total number of ESM Bearer Modify Reject messages sent, with the cause “Invalid PTI”, for a specific ESM event associated with all MME services on the system.
Insufficient Resources	The total number of ESM Bearer Modify Reject messages sent, with the cause “Insufficient Resources”, for a specific ESM event associated with all MME services on the system.
Deactivate Bearer	The total number of ESM Deactivate Bearer messages sent for a specific ESM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted ESM Deactivate Bearer messages sent for a specific ECM event associated with all MME services on the system.
ESM Information Req	The total number of ESM Information Request messages sent for a specific ESM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted ESM Information Request messages sent for a specific ECM event associated with all MME services on the system.
Modify Bearer	The total number of ESM Modify Bearer messages sent for a specific ESM event associated with all MME services on the system.
Retransmissions	The total number of retransmitted ESM Modify Bearer messages sent for a specific ECM event associated with all MME services on the system.
PDN Connectivity Reject	The total number of ESM PDN Connectivity Reject messages sent for a specific ESM event associated with all MME services on the system.
PTI Already in Use	The total number of ESM PDN Connectivity Reject messages sent, with the cause “PTI Already in Use”, for a specific ESM event associated with all MME services on the system.
Unknown or Missing APN	The total number of ESM PDN Connectivity Reject messages sent, with the cause “Unknown or Missing APN”, for a specific ESM event associated with all MME services on the system.
Unknown PDN Type	The total number of ESM PDN Connectivity Reject messages sent, with the cause “Unknown PDN Type”, for a specific ESM event associated with all MME services on the system.
Invalid Bearer Id	The total number of ESM PDN Connectivity Reject messages sent, with the cause “Invalid Bearer Id”, for a specific ESM event associated with all MME services on the system.
Invalid PTI	The total number of ESM PDN Connectivity Reject messages sent, with the cause “Invalid PTI”, for a specific ESM event associated with all MME services on the system.
Rejected By PGW/SGW	The total number of ESM PDN Connectivity Reject messages sent, with the cause “Rejected By PGW/SGW”, for a specific ESM event associated with all MME services on the system.
PDN Disconnect Reject	The total number of ESM PDN Disconnect Reject messages sent for a specific ESM event associated with all MME services on the system.
PTI Already in Use	The total number of ESM PDN Disconnect Reject messages sent, with the cause “PTI Already in Use”, for a specific ESM event associated with all MME services on the system.
Last PDN Disconnection	The total number of ESM PDN Disconnect Reject messages sent, with the cause “Last PDN Disconnection”, for a specific ESM event associated with all MME services on the system.
Invalid PTI	The total number of ESM PDN Disconnect Reject messages sent, with the cause “Invalid PTI”, for a specific ESM event associated with all MME services on the system.
Invalid Bearer Id	The total number of ESM PDN Disconnect Reject messages sent, with the cause “Invalid Bearer Id”, for a specific ESM event associated with all MME services on the system.

Field	Description
Received	This sub-group displays the statistics of all ESM control messages received by an MME services on the system.
Clear-text messages	The total number of ESM control messages with “clear-text” flag received by all MME services on the system.
Integrity-check enabled	The total number of ESM control messages with “Integrity-Check Enabled” flag received by all MME services on the system.
Ciphered messages	The total number of ESM control messages with “Ciphered” flag received by all MME services on the system.
Accepted	The total number of ESM control messages received with “Accepted” flag by all MME services on the system.
Decode failures	The total number of ESM control messages received with “Decode failure” flag by all MME services on the system.
Act Dedicated Brr Accept	The total number of ESM Activate Dedicated Bearer Accept messages received for a specific ESM event associated with all MME services on the system.
Act Dedicated Brr Reject	The total number of ESM Activate Dedicated Bearer Reject messages received for a specific ESM event associated with all MME services on the system.
Act Default Brr Accept	The total number of ESM Activate Default Bearer Accept messages received for a specific ESM event associated with all MME services on the system.
Act Default Brr Reject	The total number of ESM Activate Default Bearer Accept messages received for a specific ESM event associated with all MME services on the system.
Deactivate Brr Accept	The total number of ESM Deactivate EPS Bearer Context Accept messages received for a specific ESM event associated with all MME services on the system.
Brr Rsrc Alloc Request	The total number of ESM Bearer Resource Allocation Request messages received for a specific ESM event associated with all MME services on the system.
Brr Rsrc Modify Request	The total number of ESM Bearer Resource Modify Request messages received for a specific ESM event associated with all MME services on the system.
ESM Information Response	The total number of ESM Information Response messages received for a specific ESM event associated with all MME services on the system.
ESM Status	The total number of ESM Status messages received for a specific ESM event associated with all MME services on the system.
Modify Brr Ctxt Accept	The total number of ESM Modify Bearer Context Accept messages received for a specific ESM event associated with all MME services on the system.
Modify Brr Ctxt Reject	The total number of ESM Modify Bearer Context Reject messages received for a specific ESM event associated with all MME services on the system.
PDN Connectivity Request	The total number of ESM PDN Connectivity Request messages received for a specific ESM event associated with all MME services on the system.
PDN Disconnect Request	The total number of ESM PDN Disconnect Request messages received for a specific ESM event associated with all MME services on the system.

Field	Description
CS only handover with no DTM support	This sub-group displays the all Sv-based (MME-R8/2.5G/SGSN) circuit-switched, non-DTM (Dual Transfer Mode) handover attempts/successes/failures and associated with all MME services on the system.
CS only handover	This sub-group displays the all Sv-based (MME-R8/2.5G/SGSN) circuit-switched handover attempts/successes/failures and associated with all MME services on the system.
CS and PS handover	This sub-group displays the all Sv-based (MME-R8/2.5G/SGSN) circuit-switched and packet-switched handover attempts/successes/failures and associated with all MME services on the system.
PDN Statistics	
All PDNs	This sub-group displays statistics for all PDNs, connected and idle, through the MME service(s) on the system.
Connected PDNs	This sub-group displays statistics for connected PDNs through the MME service(s) on the system.
Idle PDNs	This sub-group displays statistics for idle PDNs through the MME service(s) on the system.
Emergency PDN Statistics	
All PDNs	This sub-group displays statistics for all emergency PDNs, connected and idle, through the MME service(s) on the system.
Connected PDNs	This sub-group displays statistics for connected emergency PDNs through the MME service(s) on the system.
Idle PDNs	This sub-group displays statistics for idle emergency PDNs through the MME service(s) on the system.
Bearer Statistics	
All Bearers	This sub-group displays statistics for all bearers, connected and idle, through the MME service(s) on the system.
Connected Bearers	This sub-group displays statistics for connected bearers through the MME service(s) on the system.
Idle Bearers	This sub-group displays statistics for idle bearers through the MME service(s) on the system.
Session Statistics	
Attached Calls	This sub-group displays statistics for all calls, connected and idle, through the MME service(s) on the system.
Connected Calls	This sub-group displays statistics for connected calls through the MME service(s) on the system.
Idle Calls	This sub-group displays statistics for idle calls through the MME service(s) on the system.
Emergency Session Statistics	
Attached Calls	This sub-group displays statistics for all emergency calls, connected and idle, through the MME service(s) on the system.
Connected Calls	This sub-group displays statistics for connected emergency calls through the MME service(s) on the system.
Idle Calls	This sub-group displays statistics for idle emergency calls through the MME service(s) on the system.
Unauthenticated Session Statistics	

Field	Description
Attached Calls	This sub-group displays statistics for all unauthenticated calls, connected and idle, through the MME service(s) on the system.
Connected Calls	This sub-group displays statistics for connected and unauthenticated calls through the MME service(s) on the system.
Idle Calls	This sub-group displays statistics for idle unauthenticated calls through the MME service(s) on the system.
Disconnect Statistics	
UE detached	The total number of disconnected sessions, with the reason “UE detached”, originally connected through the MME service(s) on the system.
PGW detached	The total number of disconnected sessions, with the reason “PGW detached”, originally connected through the MME service(s) on the system.
HSS detached	The total number of disconnected sessions, with the reason “HSS detached”, originally connected through the MME service(s) on the system.
MME detached	The total number of disconnected sessions, with the reason “MME detached”, originally connected through the MME service(s) on the system.
Implicit detach	The total number of disconnected sessions, with the reason “Implicit detach”, originally connected through the MME service(s) on the system.
Local abort	The total number of disconnected sessions, with the reason “Local abort”, originally connected through the MME service(s) on the system.
Authentication failure	The total number of disconnected sessions, with the reason “Authentication failure”, originally connected through the MME service(s) on the system.
Sub parameter failure	The total number of disconnected sessions, with the reason “Sub parameter failure”, originally connected through the MME service(s) on the system.
Other reasons	The total number of disconnected sessions, with the reason “Other reasons”, originally connected through the MME service(s) on the system.

Chapter 126

show multicast-sessions

This chapter includes the `show multicast-sessions` command output tables.

show multicast-sessions all

Table 327. show multicast-sessions all Command Output Descriptions

Field	Description
vvvvv	Displays service and session state information. This column provides a code consisting of three characters. From left-to-right, the first character represents the Session Type that the subscriber is using. The possible session types are: • B: BCMCS • M: MBMS Multicast • R: MBMS Broadcast From left-to-right, the second character represents the Framing Type. The possible framing types are: • H: HDLC Like • S: Segment Based • x: Not Applicable From left-to-right, the third character represents the Flow Type. The possible flow types are: • F: Flow • P: Program • u: Unknown From left-to-right, the fourth character represents the Call State of the session. The possible call states are: • C: Connected • c: Connecting • D: Disconnecting • u: Unknown From left-to-right, the fifth character represents the Link Status of the session. The possible idle states are: • A: Online/Active • D: Dormant/Idle
CALLID	Displays the subscriber's call identification (callid) number.
FLOW ID	Displays the flow identification for multicast service session.
MCAST ADDR	Displays the IP address of Broadcast Multicast service center.
APN/PORT	Displays the APN name or port number through which the multicast services is provided.
PEER ADDR	Displays the IP address of Access Gateway to which the subscriber is attached.
TIME-IDLE	Displays the amount of time that the subscriber session has been idle either in an active or dormant state.

show multicast-sessions full all

Table 328. show multicast-sessions full all Command Output Descriptions

Field	Description
Flow Id	Hex value indicating the Flow ID.
state	Indicates the status of session. The possible status are: • Connected • Connecting • Disconnecting • Unknown
Access Type	Indicates the access type of broadcast-multicast service. Possible values are: • mbms-bearer: access through MBMS bearer context • mbms-ue: access through MBMS UE context
Flow ID Type	Indicates the Flow ID type.
callid	Displays the call identification number (callid).
connect time	Displays the time of connection starts.
call duration	Specifies total duration of call session in hh:mm:ss format
idle time	Displays the amount of time that the multicast session has been idle either in an active or dormant state.
idle time left	Shows the amount of idle time left before timeout.
session time left	How much session time is left for the specified multicast session.
Multicast ip address	The IP address of the interface in the session.
peer address	The IP address of the peer in the session.
source context	Specifies the name of a configured source context from which the session was initiated.
destination context	Specifies the name of a configured destination context through which the subscribers are provided access to the packet data network.
output pkts	Indicates the number of packets transmitted.
output bytes	Indicates the number of bytes transmitted.
outputs pkts dropped	Indicates the number of packets that were dropped while receiving data for this multicast session.
pk rate to peer (bps)	The peak data rate, in bits per second, obtained for data sent from the subscriber to the network during the last sampling period.
pk rate to peer (pps)	The peak data rate, in packets per second, obtained for data received from the network by the subscriber during the last sampling period.

■ show multicast-sessions full all

Field	Description
ave rate to peer (bps)	The average data rate, in bits per second, obtained for data received from the network by the subscriber during the last sampling period.
ave rate to peer (pps)	The average data rate, in packets per second, obtained for data received from the network by the subscriber during the last sampling period.
sust rate to peer (bps)	The mean data rate, in bits per second, obtained for data received from the network by the subscriber during the last three sampling periods.
sust rate to peer (pps)	The mean data rate, in packets per second, obtained for data received from the network by the subscriber during the last three sampling periods.

Chapter 127

show ntp

This chapter describes the output of the **show ntp** command.

show ntp status

Table 329. show ntp status Command Output Descriptions

Field	Description
system peer	The current synchronization source.
system peer mode	The mode of the association between the system and the synchronization source. The association can operate in one of the following modes as defined in RFC 1305: symmetric active symmetric passive client server broadcast
leap indicator	The two-bit code that will be used to indicate the insertion of a leap second in the NTP timescale.
stratum	The quality level of the system clock.
precision	A signed integer that indicates the precision of the system clock.
root distance	The round-trip packet delay to the primary reference source. The delay is measured in seconds.
root dispersion	The maximum error relative to the primary reference source. The error is measured in seconds.
reference ID	The code that identifies the current synchronization source.
reference time	The local time that the system was last updated using NTP.
system flags	Indicates various communication parameters between the system and the server. The possible flags are as follows: auth: Enables the server to synchronize with unconfigured peers only if the peer has been correctly authenticated using either public key or private key cryptography. bcclient: Enables the server to listen for a message from a broadcast or multicast server, as in the multicast client command with default address. calibrate: Enables the calibrate feature for reference clocks. kernel: Enables the kernel time discipline, if available. monitor: Enables the monitoring facility. ntp: Enables time and frequency discipline. In effect, this switch opens and closes the feedback loop, which is useful for testing. pps: Enables the pulse-per-second (PPS) signal when frequency and time is disciplined by the precision time kernel modifications. stats: Enables the statistics facility.
jitter	The maximum amount of fluctuation within the synchronization source due to random noise.
stability	The stability of the clocking source in parts per million (ppm).
broadcast delay	The round-trip delay for broadcast messages in seconds.
auth delay	The round-trip delay for authentication messages in seconds.

Chapter 128

show nw-reachability server all

Table 330. show nw-reachability server Command Output Descriptions

Field	Description
Server	The name that was configured for this server in the current context.
remote-addr	The IP address to which ping packets are sent in order to determine network reachability.
local-addr	The IP address that is used as the source address of ping packets sent to the reachability server.
state	The state of the network reachability server. Either Up or Down. Up: The server is responding to ping packets. Down: The server is not responding to ping packets.
Total Network Reachability Servers:	The total number of network reachability servers that are configured in the current context.
Up:	The number of network reachability servers that are responding.

Chapter 129

show operator-policy

This chapter describes the output of the `show operator-policy` command.

show operator-policy full name

Displays detailed configuration information for a specific operator policy configured on the system. While operator policies can be configured on SGSN, MME, and S-GW products, the information provided below only applies to SGSN.

Table 331. show operator-policy full name Command Output Descriptions

Field	Description
Operator Policy Name	The name of the operator policy you chose to view.
Call Control Profile Name	The name of the call control profile associated with this operator policy (only one call control profile per operator policy) or none-associated if no profile has been associated with this operator policy.
Validity	Indicates whether the profile name listed above already exists (Valid) or has not been created yet (Invalid).
APN Remap Table Name	The name of the access point name (APN) remap table associated with this operator policy (only one APN remap table per operator policy) or none-associated if no APN remap table has been associated with this operator policy.
Validity	Indicates whether the APN remap table name listed above already exists (Valid) or has not been created yet (Invalid).
IMEI Range	A range of international mobile equipment identity numbers associated with this operator policy or none-associated if no ranges have been associated with this operator policy. Up to 10 IMEI ranges can be associated with an operator policy.
IMEI Profile Name	The name of the IMEI profile associated with the IMEI number range above or none if no profile is associated with this range.
Include/Exclude	Indicates whether the IMEI range is associated with an IMEI profile (Include) or not associated with any IMEI profile (Exclude).
APN Associations	If no APN parameters are associated with this operator policy, this entry appears with the value none-associated .
APN NI	
APN Profile Name	The name of the APN profile associated with the APN network identifier show above.
Validity	Indicates whether the APN profile name listed above already exists (Valid) or has not been created yet (Invalid).
APN OI	
APN Profile Name	The name of the APN profile associated with the APN operator identifier show above.
Validity	Indicates whether the APN profile name listed above already exists (Valid) or has not been created yet (Invalid).
Default APN	
APN Profile Name	The name of the APN profile associated with the default access point name.
Validity	Indicates whether the APN profile name listed above already exists (Valid) or has not been created yet (Invalid).

Chapter 130

show orbem

This chapter describes the output of the **show orbem** command.

show orbem client id

Table 332. show orbem client id Command Output Descriptions

Field	Description
Application Server ID	The name of the ORBEM client as configured by the client command in the ORBEM configuration mode.
State	The status of the ORBEM client as “Enabled” or “Disabled”. This indicates whether or not the system is manageable by the external Web Element Manager server: enabled indicates that it can be managed, disabled indicates that it is unmanageable. If the status is “Disabled”, it can be enabled by executing the activate client id command in the ORBEM Configuration Mode.
Privileges	Indicates the management capabilities of the client as “FCAPS” (Fault, Configuration, Accounting, Performance, and Security).

show orbem status

Table 333. show orbem status Command Output Descriptions

Field	Description
Service State	Indicates whether the service state of the ORBEM client on the system is enabled (on) or disabled (off).
Management Functions	Indicates which management functions ORBEM is currently allowing. Possible values for this field are: • Fault • Configuration • Accounting • Performance • Security
IOP URL	Indicates the universal resource locator (URL) of the system interface over which the Inter-ORB Protocol (IOP) will communicate.
SSL Port	Indicates the Secure Socket Layer Inter-ORB Protocol (SIOP) TCP port that will be used by the ORB server (that runs on the system) to communicate with the client.
TCP port	Indicates the Internet Inter-ORB Protocol (IIOP) Transport Control Protocol (TCP) port that will be used by the ORB server (that runs on the system) to communicate with the client. This is only used if IIOP transport is needed in addition to SIOP.
Notification SSL Port	Indicates the TCP port number to be used by the CORBA event notification service SIOP transport.
Notification TCP Port	Indicates the TCP port number to be used by the CORBA event notification service IIOP transport.
Session Timeout	Indicates the amount of time an ORBEM client-session can be open and remain idle before ORBEM terminates the session. This value is a global value that is applied to all configured ORBEM clients.
Max Login Attempts	Indicates the maximum number of times a client can attempt to login before ORBEM de-activates the client id.
IIOP Transport	Indicates whether the Internet Inter-ORB Protocol (IIOP) transport is enabled (on) or disabled (off).
Notification	Indicates whether the CORBA event notification service on the system is enabled (on) or disabled (off).
Number of Current Sessions	Indicates the number of ORBEM sessions that currently exist.
Number of Event Channels Open	Indicates the number of ORBEM event channels that are currently open.
Number of Operations Completed	Indicates the number of ORBEM operations that have been completed.
Number of Events Processed	Indicates the number of ORBEM events that have been processed.

■ show orbem status

Field	Description
Avg Operation Processing time	Indicates the average processing time in seconds of recent ORBEM events.
(last 1000)	Indicates the average processing time in seconds of the last 1000 ORBEM events.

show orbem session table

Table 334. show orbem session table Command Output Descriptions

Field	Description
Session ID	The identification number for the ORBEM session. This is a number used within the system to reference the session.
Application Server	Indicates server that the ORBEM session is established with by the client id that was configured for the server.
Context Name	The name of the context on the system that is facilitating the ORBEM configuration.
Last transaction	Indicates the date and time of the last transaction between the system and the application server.

show orbem session table

Table 335.show orbem session table Command Output Descriptions

Field	Description
Session ID	The identification number for the ORBEM session. This is a number used within the system to reference the session.
Application Server	Indicates server that the ORBEM session is established with by the client id that was configured for the server.
Context Name	The name of the context on the system that is facilitating the ORBEM configuration.
Last transaction	Indicates the date and time of the last transaction between the system and the application server.

Chapter 131

show pcc-af

This chapter describes the output of the `show pcc-af` command.

show pcc-af service all

Table 336. show pcc-af service all Command Output Description

Variables	Description
Service Name	The name of the PCC-AF service for which statistics are collected or displayed.
Context	The name of the context in which PCC-AF service is configured.
Service State	Indicates the state of PCC-AF service.
Diameter	This group indicates the Diameter endpoint configuration information for Rx interface.
Origin	Indicates the name of the Diameter origin endpoint configured for PCC-AF service.
Dictionary	Indicates the name of the Diameter dictionary configured for Rx interface in PCC-AF service. By default it is "Standard" dictionary.
Associated PCC-Service	Indicates the name of the PCC-Service associated with PCC-AF service.
Max Charging Sessions	Indicates the maximum number of charging sessions allowed in this PCC-AF service instance. By default it is 10000.
Newcall Policy	Indicates the new call policy configured to manage the congestion control on a PCC-AF service.

show pcc-af service statistics

Table 337. show pcc-af service statistics Command Output Description

Variables	Description
Service Name	The name of the PCC-AF service for which statistics are collected or displayed.
Inbound Messages	Indicates the total number of Rx messages received.
AAR Messages	Indicates the total number of Rx AAR messages received.
STR Messages	Indicates the total number of Rx STR messages received.
RAR Messages	Indicates the total number of Rx RAR request received.
ASR Messages	Indicates the total number of Rx ASR request received.
Outbound Messages	Indicates the total number of Rx messages sent.
Accepted AAR Messages	Indicates the total number of Rx AAR-Accepted messages sent.
Accepted STR Messages	Indicates the total number of Rx STR-Accepted messages sent.
RAA Messages	Indicates the total number of Rx RAA messages sent.
ASA Messages	Indicates the total number of Rx ASA sent.
Unknown Messages	Indicates the total number of unknown type of Rx messages received.

Chapter 132

show pcc-policy

This chapter describes the output of the `show pcc-policy` command.

show pcc-policy service all

Table 338. show pcc-policy service all Command Output Description

Field	Description
Service name	Indicates the name of the PCC-Policy service instance for which counters are displayed.
Context name	Indicates the name of the context in which the PCC-Policy service instance is configured and running.
Service State	Displays the state of PCC-Policy service instance on an IPCF node. Possible states are: • Initial • Connected • Disconnected
Diameter	This group displays information of Diameter configuration parameters configured in this PCC-Policy service instance.
Origin	Indicates the name of the Diameter origin host configured in this PCC-Policy service instance.
Dictionary	Indicates the Diameter dictionary configured and used for Diameter session (Gx) in this PCC-Policy service instance.
Associate PCC-Service	Indicates the name of the PCC service which is associated with this PCC-Policy service instance.
Max Policy Sessions	Indicates the maximum limit of policy (Gx) sessions allowed in this PCC-Policy service instance.
Newcall Policy	Indicates the action configured when new calls arrived after reaching a threshold limit in this PCC-Policy service instance to manage the congestion control. If configured possible actions are: • drop • reject
GPRS-Access-BCM	Indicates the Bearer Control Mode configured in PCC-Policy service instance to access the PCEF in GPRS network. If configured possible modes are: • as-requested: the PCC-Policy service is configured to accept the BCM request from Application Server (AS) for PCEF access over Gx interface on IPCF node. This is the default mode. • ue-nw: the PCC-Policy service is configured to accept the BCM request from UE and/or network element for PCEF access over Gx interface on IPCF node. • ue-only: the PCC-Policy service is configured to accept the BCM request from UE only for PCEF access over Gx interface on IPCF node.

Field	Description
eHRPD-Access-BCM	Indicates the Bearer Control Mode configured in PCC-Policy service instance to access the PCEF in eHRPD network. If configured possible modes are: • as-requested: the PCC-Policy service is configured to accept the BCM request from Application Server (AS) for PCEF access over Gxa interface on IPCF node. This is the default mode. • ue-nw: the PCC-Policy service is configured to accept the BCM request from UE and/or network element for PCEF access over Gxa interface on IPCF node. • ue-only: the PCC-Policy service is configured to accept the BCM request from UE only for PCEF access over Gxa interface on IPCF node.
Subscriber Binding ID	Indicates the subscriber binding identifier used by bindmux for binding subscriber session to PCC-Policy service instance. If configured possible binding identifiers are: • IMSI • MSISDN • NAI • SIP-URI
Subscription-ID Absence Action	Indicates the action configured for PCC Policy when CCR-I message is received by IPCF/PCRF without a valid Subscription id (IMSI, NAT, E164 etc.). Possible actions are: • Continue • Reject

show pcc-policy service statistics

Table 339. show pcc-policy service statistics Command Output Description

Field	Description
Total Services	Indicates the total number of PCC-Policy services for which counters are displayed.
Messages Statistics	This group displays the summary statistics of messages in a PCC Policy service instance.
Total Messages Recv	Indicates total number of inbound messages received (CCR + RAA).
Total Messages sent	Indicates total number of outbound messages sent (CCA + RAR).
Total CCR	Indicates total number of known (I/U/T) and unknown CCR received.
CCR-Initial	Indicates total number of CCR-I messages received.
CCR-Updates	Indicates total number of CCR-U messages received.
CCR-Terminate	Indicates total number of CCR-T messages received..
Unknown CCR	Indicates total number of CCR messages received with type not determined.
Total CCA	Indicates total number of known (I/U/T) and unknown CCA sent..
CCA-Initial	Indicates total number of CCA-I messages sent.
CCA-Updates	Indicates total number of CCA-U messages sent.
CCA-Terminate	Indicates total number of CCA-T messages sent.
Unknown CCA	Indicates total number of CCA messages sent as response to CCR with type not determined..
CCA with Success	Indicates total number of CCA messages sent with Result-Code as DIAMETER_SUCCESS(2001).
CCA-I with Success	Indicates total number of CCA-I messages sent with Result-Code as DIAMETER_SUCCESS(2001).
CCA-U with Success	Indicates total number of CCA-U messages sent with Result-Code as DIAMETER_SUCCESS(2001).
CCA-T with Success	Indicates total number of CCA-T messages sent with Result-Code as DIAMETER_SUCCESS(2001).
CCA with Failures	Indicates total number of CCA messages rejected.
CCA-I with Failures	Indicates total number of CCA-I messages rejected.
CCA-U with Failures	Indicates total number of CCA-U messages rejected.

Field	Description
CCA-T with Failures	Indicates total number of CCA-T messages rejected.
Total RAA	Indicates total RAA messages received.
Total RAR	Indicates total RAR messages sent.
RAA with Success	Indicates total RAA messages with Result-Code or Experimental-Result-Code as SUCCESS..
RAA with Failure	Indicates total RAA messages with Result-Code or Experimental-Result-Code depicting FAILURE..
RAA without Result	Indicates total RAA messages with both Result-Code or Experimental-Result-Code absent..
Unexpected RAA	Indicates total RAA messages for the non-existing sessions.
RAA parse Success	Indicates total RAA messages with parsing SUCCESS..
RAA parse Failure	Indicates total RAA messages with parsing FAILURE.
Reauth probes	Indicates total RAA messages with reauthorization triggers for subscriber session due to expiry idle timeout timer.
RAR for Sess Release	Indicates total RAR message with Session Release-Cause.
Unspecified	Indicates total RAR message with Session Release-Cause AVP as UNSPECIFIED (0).
UE-subscription-Reason	Indicates total RAR message with Session Release-Cause AVP as UE_SUBSCRIPTION_CHANGED (1).
Insuff Server Resources	Indicates total RAR message with Session Release-Cause AVP as INSUFFICIENT_SERVER_RESOURCES (2).
Total RAR Timeouts	Indicates total RAR messages for which no RAA response was received from PCEF.
Update RAR Timeouts	Indicates total Timed-out RAR messages which were sent by PCRF for session updates (e.g. RAR with new / modified PCC rules / QoS).
Release RAR Timeouts	Indicates total Timed-out RAR messages which were sent by PCRF for session termination (RAR with Session-Release-Cause AVP).
Session-Level Statistics	This group displays the session level statistics of messages in a PCC Policy service instance.
Current Sessions	Indicates the session counter which keeps track of existing sessions under this PCC -Policy service.
Total Session Created	Indicates cumulative number of sessions created at the PCC-Policy service.
Total Session Updates	Indicates cumulative number of sessions updates at the PCC-Policy service. This will include both PCRF-initiated and PCEF initiated updates.
PCEF-Initiated	Indicates cumulative number of PCEF-initiated sessions updates at the PCC-Policy service. This will include session updates through CCR-U message.

Field	Description
PCRF-Initiated	Indicates cumulative number of PCRF-initiated sessions updates at the PCC-Policy service. This will include session updates through RAR.
Total Session Deleted	Indicates cumulative number of session deletion at the PCC-Policy service.
PCEF-Initiated	Indicates cumulative number of PCEF-initiated session terminations at the PCC-Policy service initiated through CCR-T message.
PCRF-Initiated	Indicates cumulative number of PCRF-initiated session termination at the PCC-Policy service initiated through RAR messages with Session-Release-Cause AVP.
Peer Down Initiated	Indicates cumulative number of sessions terminations due to peer disconnect at the PCC-Policy service..
Initial Reject	Indicates cumulative number of sessions terminations at the PCC-Policy service initiated through CCR-I rejection.
Failure Statistics	This group displays the statistics of various failure reasons in a PCC Policy service instance.
Missng CCR-Type	Indicates total number of CCR messages with mandatory CC-Request-Type AVP missing.
Unexpected CCR-I	Indicates total number of CCR-I message for existing session.
Unexpected CCR-U	Indicates total number of CCR-U message for non-existing session.
Unexpected CCR-T	Indicates total number of CCR-T message for non-existing session.
Missng CCR-Num	Indicates total number of CCR messages with mandatory CC-Request-Number missing.
Out-of-Order CCR	Indicates total number of CCR messages with out-of-order CC-Request-Number.
PCC-Sess Create Fail	Indicates total number of PCC Session Creation Failure after receiving CCR-I due to miscellaneous reasons.
Policy-Sess Create Fail	Indicates total number of PCC Policy Session Creation Failure after receiving CCR-I due to miscellaneous reasons.
PCC-Sess Lookup Fail	Indicates total number of PCC Session Creation Failure after receiving CCR-U/T due to miscellaneous reasons.
Policy-Sess Lookup Fail	Indicates total number of PCC Policy Session Creation Failure after receiving CCR-U/T due to miscellaneous reasons.
Missing Origin-Host	Indicates total number of CCR messages with mandatory Origin-Host AVP missing.
Invalid Origin-Host	Indicates total number of CCR messages with mandatory Origin-Host AVP invalid.
Missing Origin-Realm	Indicates total number of CCR messages with mandatory Origin-Realm AVP missing.
Invalid Origin-Realm	Indicates total number of CCR messages with mandatory Origin-Realm AVP invalid.

Field	Description
Missing Dest-Realm	Indicates total number of CCR messages with mandatory Destination-Realm AVP missing.
Invalid Dest-Realm	Indicates total number of CCR messages with mandatory Destination-Realm AVP invalid.
Unsubscribed Triggers	Indicates total number of Event-Trigger received from PCEF for which PCRF has not subscribed (E.g. RAT_CHANGE received from PCEF even though it is not supplied previously by PCRF).
Unkown Triggers	Indicates total number of Event-Trigger received from PCEF which is undefined for the policy version. (E.g. Default-EPS-Bearer-QoS-Change received for R7-Gx).
Non-Applicable Triggers	Indicates total number of Event-Trigger received from PCEF which is not applicable for the access-type. (E.g. Default-EPS-Bearer-QoS-Change received for R8 GGSN with 3GPP-GPRS access).
Missing Trigger-Param	Indicates total number of Event-Trigger received from PCEF without the related parameter (E.g. PCEF sending RAT_CHANGE without the RAT-Type value).
Invalid Trigger-Param	Indicates total number of Event-Trigger received from PCEF with invalid related parameter (E.g. PCEF sending RAT_CHANGE by RAT-Type reported is same as previous one).
Event-Trigger in CCR-I	Indicates total number of Event-Trigger received from PCEF in CCR-I message.
Event-Trigger in CCR-T	Indicates total number of Event-Trigger received from PCEF in CCR-T message.
Invalid BCM Request	Indicates total number of failure cases where PCEF requests bearer control mode (BCM) as UE-ONLY by sending Network-Request-Not-Supported in CCR-I. However, operator configured BCM is UE-NW. Thus, BCM is not provisioned and PCRF rejects this CCR.
QoS-Auth Fail	Indicates total number of failure when PCRF rejects the CCR in case of QoS-authorization failure in CCR-I message.
Invalid Initial Param	Indicates total number of failure when PCRF rejects the CCR with Experimental Result-Code DIAMETER_ERROR_INITIAL_PARAMETERS due to incorrect information in the request.
Invalid AVP Value	Indicates total number of failure when PCRF rejects the CCR with Result-Code DIAMETER_INVALID_AVP_VALUE due to incorrect AVP value in the request.
Unsupported AVP	Indicates total number of failure when PCRF rejects the CCR with Result-Code DIAMETER_AVP_UNSUPPORTED due to incorrect AVP value in the request.
Missing AVP	Indicates total number of failure when PCRF rejects the CCR with Result-Code DIAMETER_MISSING_AVP due to incorrect AVP value in the request.
Session-Linking Failurre	Indicates total number of failure when PCRF rejects the CCR-I with Result-Code DIAMETER_AUTHORIZATION_REJECTED due to Session Linking failure.
Unavail Srv Credits	Indicates total number of session failure due to unavailability of enough service credits for PCC-Policy Session creation.
Multiple Policy Sess Reject	Indicates total number of session rejection due to no-support for multiple PCC session per subscriber available but attempted by PCEF.
Diameter Statistics	This group displays the statistics of various Diameter interface messages in a PCC Policy service instance.

Field	Description
App Register Success	Indicates total number of successful diabase registrations at this PCC-Policy service due to service addition.
App Register Fail	Indicates total number of failed diabase registrations performed at this PCC-Policy service due to service addition.
App Unregister Success	Indicates total number of successful diabase deregistration at this PCC-Policy service due to service removal.
App Unregister Fail	Indicates total number of failed diabase deregistration performed at this PCC-Policy service due to service removal.
App Reregister Success	Indicates total number of successful diabase re-registrations at this PCC-Policy service due to service modification.
App Reregister Fail	Indicates total number of failed diabase registrations performed at this PCC-Policy service due to service modification.
Total Msg Create Fail	Indicates total number of failure to create diabase messages for CCA and RAR.
CCA Create Fail	Indicates total number of failure to create diabase messages for CCA.
RAR Create Fail	Indicates total number of failure to create diabase messages for RAR.
Total Msg Encode Fail	Indicates total number of failure to encode diabase message AVP for CCA and RAR.
CCA Encode Fail	Indicates total number of failure to encode diabase message AVP for CCA.
RAR Encode Fail	Indicates total number of failure to encode diabase message AVP for RAR.
Total Msg Send Fail	Indicates total number of failure to send diabase messages for CCA and RAR.
CCA Send Fail	Indicates total number of failure to send diabase messages for CCA.
RAR Send Fail	Indicates total number of failure to send diabase messages for RAR.
Termination Cause Statistics	This group displays the statistics of various causes for session termination in a PCC Policy service instance.
Diameter Logout	Indicates total number of session termination happened due to CCR-T with Termination-Cause AVP set to value DIAMETER_LOGOUT (1).
Serv	Indicates total number of session termination happened due to CCR-T with Termination-Cause AVP set to value DIAMETER_SERVICE_NOT_PROVIDED (2).
Bad Answer	Indicates total number of session termination happened due to CCR-T with Termination-Cause AVP set to value DIAMETER_BAD_ANSWER (3).
Administrative	Indicates total number of session termination happened due to CCR-T with Termination-Cause AVP set to value DIAMETER_ADMINISTRATIVE (4).
Link Broken	Indicates total number of session termination happened due to CCR-T with Termination-Cause AVP set to value DIAMETER_LINK_BROKEN (5).
Auth Expired	Indicates total number of session termination happened due to CCR-T with Termination-Cause AVP set to value DIAMETER_AUTH_EXPIRED (6).

Field	Description
User Moved	Indicates total number of session termination happened due to CCR-T with Termination-Cause AVP set to value DIAMETER_USER_MOVED (7).
Session Timeout	Indicates total number of session termination happened due to CCR-T with Termination-Cause AVP set to value DIAMETER_SESSION_TIMEOUT (8).
Rule Report Statistics	This group displays the statistics of various Rule Reports in a PCC Policy service instance.
Total Rules Reports	Indicates total number of rule-reports received for various PCC/QoS rules.
Total Install Failures	Indicates total number of rule-reports received for various PCC/QoS rule installation failures.
Total Install Success	Indicates total number of rule-reports received for various successful PCC rule installation.
Total Credit Exhaustion	Indicates total number of rule-reports received for various PCC rule out-of-credit.
Total Credit Reallocs	Indicates total number of rule-reports received for various PCC rule credit reallocation.
Unknown Rule-Names	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as UNKNOWN_RULE_NAME (1).
Rating Group Errors	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as RATING_GROUP_ERROR (2).
Service-ID Errors	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as SERVICE_IDENTIFIER_ERROR (3).
GW-PCEF Malfunctions	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as GW/PCEF_MALFUNCTION (4).
Resource Limitations	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as RESOURCES_LIMITATIONS (5).
Max-NR-Bearers Reached	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as MAX_NR_BEARERS_REACHED (6).
Unknown Bearer ID	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as UNKNOWN_BEARER_ID (7).
Missing BearerID	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as MISSING_BEARER_ID (8).
Missing Flow-Desc	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as MISSING_FLOW_DESCRIPTION (9).
Resource Alloc Fail	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as RESOURCE_ALLOCATION_FAILURE (10).
QoS Validation Fail	Indicates total number of rule-reports received for various PCC rule installation failures with Rule-Failure-Code as UNSUCCESSFUL_QOS_VALIDATION (11).
Usage Statistics	This group displays the usage statistics in a PCC Policy service instance.

Field	Description
Total Usage Thresholds	Indicates total number of usage thresholds supplied to PCEF for various monitoring instances.
Rule-Level Thresholds	Indicates total number of PCC-Rule-Level usage thresholds supplied to PCEF for various monitoring instances.
Sess-Level Thresholds	Indicates total number of Session-Level usage thresholds supplied to PCEF for various monitoring instances.
Rule-Level Report Req	Indicates total number of PCRF initiated PCC-Rule-Level usage report requests supplied to PCEF for various monitoring instances.
Sess-Level Report Req	Indicates total number of PCRF initiated session-level usage report requests supplied to PCEF for various monitoring instances.
Rule-Level Disable Requests	Indicates total number of PCRF initiated PCC-Rule-level usage report disable requests supplied to PCEF for various monitoring instances.
Sess-Level Disable Req	Indicates total number of PCRF initiated session-level usage report disable requests supplied to PCEF for various monitoring instances.
SPR Statistics	This group displays the statistics related to SSC/SPR instances and procedures associated with a PCC Policy service instance.
Profile Register	Indicates total messages sent to SPR for Subscriber Profile Registration.
Profile Deregister	Indicates total messages sent to SPR for Subscriber Profile Deregistration.
Usage Register	Indicates total messages sent to SPR for Subscriber Usage Registration.
Usage Deregister	Indicates total messages sent to SPR for Subscriber Usage Deregistration.
Usage Updates	Indicates total messages sent to SPR for Subscriber Usage Update.

show pcc-policy session full all

Table 340. show pcc-policy session full all Command Output Description

Field	Description
Callid	Indicates the identity number of the IP-CAN call registered on the PCC-Policy service instance for which counters are displayed.
Session ID	Indicates the identity number of the IP-CAN session active on the PCC-Policy service instance for which counters are displayed.
Peer ID	Indicates the identity number (IP address) of the PCEF node used in IP-CAN session within the PCC-Policy service instance for which counters are displayed.
Service Name	Indicates the name of the PCC-Policy service instance for which counters are displayed.
Service Type	Indicates the type of IP-CAN session on the PCC-Policy service instance for which counters are displayed.
IMSI	Indicates the IMSI number of subscriber used by bindmux for binding subscriber session to PCC-Policy service instance.
MSISDN	Indicates the MSISDN number of subscriber used by bindmux for binding subscriber session to PCC-Policy service instance.
APN Name	Indicates the name of the APN used by IP-CAN session to serve subscriber in the PCC-Policy service instance.
IMEI	Indicates the IMEI number of UE used by bindmux for binding subscriber session to PCC-Policy service instance.
Session State	Indicates the state of the IP-CAN session on PCC-Policy service instance. Possible states are: - Initial - Connected - Disconnected
Framed-IPv4	Indicates the IPv4 address, if used, for frame route relay prefix in IP-CAN session on PCC-Policy service instance.
Framed-IPv6	Indicates the IPv6 address, if used, for frame route relay prefix in IP-CAN session on PCC-Policy service instance.
RAT-Type	Indicates the Radio Access Type used for this IP-CAN session. Possible RAT types are: - UTRAN - E-UTRAN - GPRS
SGSN_MCC	Indicates the Mobile Country Code used in IP-CAN session on PCC-Policy service instance.
SGSN_MNC	Indicates the Mobile Network Code used in IP-CAN session on PCC-Policy service instance.
IP-CAN-Type	Indicates the type of IP-CAN session active on PCC-Policy service instance.

Field	Description
BCM	Indicates the Bearer Control Mode configured in PCC-Policy service instance to access the PCEF in GPRS/eHRPD network. If configured possible modes are: • as-requested: the PCC-Policy service is configured to accept the BCM request from Application Server (AS) for PCEF access over Gx interface on IPCF node. This is the default mode. • ue-nw: the PCC-Policy service is configured to accept the BCM request from UE and/or network element for PCEF access over Gx interface on IPCF node. • ue-only: the PCC-Policy service is configured to accept the BCM request from UE only for PCEF access over Gx interface on IPCF node.
ANC-Address	Indicates the IP address of the Access Network Controller node of the IP-CAN session on the PCC-Policy service instance for which counters are displayed.
ANC-Identifier	Indicates the identity number of the Access Network Controller node used in IP-CAN session within the PCC-Policy service instance for which counters are displayed.
Event-Trigger	Indicates the event triggers configured/activated for IP-CAN session within the PCC-Policy service instance for which counters are displayed.

Chapter 133

show pcc-service

This chapter describes the output of the `show pcc-service` command.

show pcc-service all

Table 341. show pcc-service all Command Output Description

Field	Description
Service name	Indicates the name of the PCC service for which counters are displayed.
Context name	Indicates the name of the context in which the PCC service is configured and running.
Charging-Method	Indicates the charging methods communicated to PCEF at command level for this PCC service. Possible methods are: • None • Offline • Online • Offline and Online By default “None” is the enabled option.
Online Charging-Server(s)	This group displays information of online charging servers (primary and secondary) configured and used in this PCC service.
Primary	Indicates the name of the primary online charging server configured and used in this PCC service.
Secondary	Indicates the name of the secondary online charging server configured and used in this PCC service.
Offline Charging-Server(s)	This group displays information of offline charging servers (primary and secondary) configured and used in this PCC service.
Primary	Indicates the name of the primary offline charging server configured and used in this PCC service.
Secondary	Indicates the name of the secondary offline charging server configured and used in this PCC service.
Subscriber-Profile Refresh Interval (sec)	Indicates the interval duration in seconds after which Subscriber profile is refreshed from SSC/SPR in a PCC service.
Multiple PCEF Per Subscriber	Indicates status of support for more than one Gx-session for single subscriber session coming from multiple PCEF in this PCC service instance. By default this feature is enabled.
Setup Timeout	Indicates IPCF setup timeout duration set on a system for setup timer. Possible range of duration is 1 to 120 in seconds. By default Setup timeout value is 60 seconds. Special value of 0 indicates that timer is disabled.
Idle Timeout	Indicates the idle session timeout duration set for a subscriber session timer. Possible range of duration is 1 to 4294967295 in seconds. Special value of 0 indicates that timer is disabled and it is the default behavior. It also displays the action configured for initiation when idle timer expires. Possible actions are: • None • Reauthorization of session. • Disconnection of session if reauthorization of session fails.

Field	Description
Long-duration Timeout	Indicates the long duration idle session timeout set for a subscriber session timer. Possible range of duration is 1 to 4294967295 in seconds. Special value of 0 indicates that timer is disabled and it is the default behavior. It also displays the action configured for initiation when long duration timeout timer expires. Possible actions are: • None • Detection of idle session and sending of SNMP traps or CORBA notification. • Detection of idle session and then disconnect the session after sending of SNMP traps or CORBA notification

show pcc-service session all

Table 342. show pcc-service session all Command Output Descriptions

Field	Description
vvvv	Displays service and session state information. This column provides a code consisting of four characters. From left-to-right, the first character represents the Session State that the subscriber is using. The possible call types are: • c: Closed • C: Connected • D: Disconnected • o: Open • S: Waiting on SPR • r: Waiting on DREG • s: Waiting on STR • e: Waiting on deallocate • t: Waiting on CCR-T • A: Waiting on ASR • R: Waiting on RAR From left-to-right, the second character represents the Gx Session Count. It indicates the total number of Gx sessions between PCEF and IPCF active in this session. From left-to-right, the third character represents the Gy Session Count. It indicates the total number of Gy sessions active in this session. From left-to-right, the second character represents the Gxa Session Count. It indicates the total number of Gx sessions between PCEF (eHRPD) and IPCF active in this session.
CALLID	Indicates the IP-CAN session subscriber's call identification number.
IMSI/MSID	Indicates the IP-CAN session subscriber's IMSI/MSID number used in this session in bindmux .
User Name	Indicates the user name used in IP-CAN session to identify the subscriber in this session in bindmux . This is typically used in IP-CAN session between PDSN and IPCF/PCRF over Gx interface.
Total number of PCC sessions	The total number of PCC sessions on chassis including all modes.

show pcc-service session full

Table 343. show pcc-service session full Command Output Descriptions

Field	Description
CALLID	Indicates the IP-CAN session subscriber's call identification number.
IMSI/MSID	Indicates the IP-CAN session subscriber's IMSI/MSID number used in this session in bindmux .
User Name	Indicates the user name used in IP-CAN session to identify the subscriber in this session in bindmux . This is typically used in IP-CAN session between PDSN and IPCF/PCRF over Gx interface.
Profile Name	Indicates the name of the subscriber used in IP-CAN session to provide QoS parameters.
Default-EPS-Bearer	Indicates whether default EPS bearer is provisioned for subscriber in IP-CAN session for which information is displayed
APN-AMBR	Indicates whether an Aggregate Maximum Bit Rate (AMBR) associated with APN is provisioned for subscriber in IP-CAN session for which information is displayed.
Authorized QCIs	This group displays the parameters for authorized Quality Class Identifiers (QCIs) used in IP-CAN session for which information is displayed.
QCI	Indicates the Quality Class Identifier (QCI) authorized and used in IP-CAN session for which information is displayed.
Uplink	Indicates the uplink bit rate provisioned in authorized QCI for IP-CAN session for which information is displayed.
Downlink	Indicates the downlink bit rate provisioned in authorized QCI for IP-CAN session for which information is displayed.
Total Predefined Rules	Indicates the total predefined Rules applicable for IP-CAN session for which information is displayed.
Predefined Rules	Indicates the name of the predefined Rules, if applicable, for IP-CAN session for which information is displayed.
Rule Status	Indicates the status of the predefined Rules, if applicable, for IP-CAN session for which information is displayed. Possible status are: • Active • Inactive • Temporarily Active

Field	Description
Rule Failure Code	Indicates the predefined Rule failure codes, if applicable, for IP-CAN session for which information is displayed. Possible failure codes are: • Out-of-credit • Reallocation-of-credit • Unknown rule name • Invalid Rating Group • Invalid Service Identifier • GW/PCEF Malfunction • Limited Resources • Max No. of Bearers Reached • Unknown Bearer Id • Missing Bearer Id • Missing Flow Description • Resource Allocation Failure • QoS Validation Failure
Rule Activation Time	Indicates the time configured to activate predefined Rule for IP-CAN session for which information is displayed.
Rule deactivation Time	Indicates the time configured to deactivate predefined Rule for IP-CAN session for which information is displayed.
Total Dynamic Rules	Indicates the total dynamic Rules applicable for IP-CAN session for which information is displayed.
Dynamic Rules	Indicates the name of the dynamic Rules, if applicable, for IP-CAN session for which information is displayed.
Rating-Group	Indicates the rating group configured to the dynamic Rules, if applicable, for IP-CAN session for which information is displayed.
Precedence	Indicates the precedence configured to the dynamic Rules, if applicable, for IP-CAN session for which information is displayed.
Gate Status	Indicates the status of the Gate configured to the dynamic Rules, if applicable, for IP-CAN session for which information is displayed.
QoS Profile	Indicates the QoS profile configured to the dynamic Rules, if applicable, for IP-CAN session for which information is displayed.
Flow	Indicates the total number of flows applicable for IP-CAN session for which information is displayed.
AF Information	Indicates the Application Function information for dynamic Rules, if applicable, for IP-CAN session for which information is displayed.

Field	Description
Rule Status	Indicates the status of the predefined Rules, if applicable, for IP-CAN session for which information is displayed. Possible status are: • Active • Inactive • Temporarily Active
Rule Failure Code	Indicates the predefined Rule failure codes, if applicable, for IP-CAN session for which information is displayed. Possible failure codes are: • Out-of-credit • Reallocation-of-credit • Unknown rule name • Invalid Rating Group • Invalid Service Identifier • GW/PCEF Malfunction • Limited Resources • Max No. of Bearers Reached • Unknown Bearer Id • Missing Bearer Id • Missing Flow Description • Resource Allocation Failure • QoS Validation Failure
Rule Activation Time	Indicates the time configured to activate dynamic Rule for IP-CAN session for which information is displayed.
Rule deactivation Time	Indicates the time configured to deactivate dynamic Rule for IP-CAN session for which information is displayed.
Quota Information	This group displays the Quota related information applicable for IP-CAN session for which information is displayed.
Usage Monitor Information	Indicates the Usage Monitor status applicable for IP-CAN session for which information is displayed.
Total number of PCC sessions	The total number of PCC sessions on chassis including all modes.

show pcc-service statistics

Table 344. show pcc-service statistics Command Output Description

Field	Description
Service name	Indicates the name of the PCC service for which counters are displayed.
Total Gx req processed	Indicates the total number of Gx request messages from PCEF processed by PCC-service node.
Total Gy req processed	Indicates the total number of Gy request messages from OCS processed by PCC-service node.
Total SSC req processed	Indicates the total number of request messages from SSC/SPR processed by PCC-service node.
Total Unknown requests	Indicates the total number of unknown type of request messages from network nodes received by PCC-service node.
PUR Updates	Indicates the total number of Profile-Update-Request update messages from network nodes received at PCC-service node.
SNR Updates	Indicates the total number of Subscribe-Notifications-Request update messages from network nodes received at PCC-service node.
PNR Updates	Indicates the total number of Push-Notifications-Request update messages from network nodes received at PCC-service node.
Total Profile Hits	Indicates the total number of Subscribe profiles accessed by PCC-service node.
Total Profile Miss	Indicates the total number of Subscribe profiles missed by PCC-service node.
Total Quota Reports	Indicates the total number of quota reports processed by PCC-service node.
Total Unknown rating-groups	Indicates the total number of unknown type of rating groups received by PCC-service node.
Total Rules Activated	Indicates the total number of Rules at PCEF activated by PCC-service node.
Total Rules Deactivated	Indicates the total number of Rules at PCEF deactivated by PCC-service node.
Total Rulebases Activated	Indicates the total number of Rulebases at PCEF activated by PCC-service node.
Total Rulebases Deactivated	Indicates the total number of Rulebases at PCEF deactivated by PCC-service node.
Total Rules Installed	Indicates the total number of Rules installed at PCEF by PCC-service node.
Total Rules Uninstalled	Indicates the total number of Rules installed at PCEF by PCC-service node.
Profile Name	Indicates the name of the subscriber profiles accessed by PCC-service node.
Profile Hits	Indicates the total number of hits received by specific subscriber profile at PCC-service node.
Eval-Priority Hits	This group displays the statistics of Evaluation Priority hits at PCC-service node.
Action Statistics	This group displays the statistics of actions triggered at PCC-service node.

Field	Description
Default EPS Bearer Auth	Indicates the total number of authorization action processed for the default EPS bearer authorization on PCC-service node.
APN AMBR Auth	Indicates the total number of authorization action processed for the APN associated Aggregate Maximum Bit Rate (AMBR) on PCC-service node.
QCI Auth	Indicates the total number of authorization action processed for the Quality Class Indicator (QCI) on PCC-service node.
Event-trigger Statistics	This group displays the statistics of event triggers at PCC-service node.
SGSN Change	Indicates the total number of “SGSN change” events triggered on PCC-service node.
QoS Change	Indicates the total number of “QoS change” events triggered on PCC-service node.
RAT Change	Indicates the total number of “RAT (Radio Access Technology) change” events triggered on PCC-service node.
TFT Change	Indicates the total number of “TFT (traffic flow template) change” events triggered on PCC-service node.
PLMN Change	Indicates the total number of “PLMN change” events triggered on PCC-service node.
Loss of flow	Indicates the total number of “Loss of Flow” events triggered on PCC-service node.
Recovery of flow	Indicates the total number of “Recovery of Flow” events triggered on PCC-service node.
IP-CAN Change	Indicates the total number of “IP-CAN Change” events triggered on PCC-service node.
QoS Change Exceeding Auth	Indicates the total number of QoS change event triggers exceeded from authorized limit on PCC-service node.
RAI Change	Indicates the total number of “RAI (Routing Area Indicator) Change” events triggered on PCC-service node.
User Location Change	Indicates the total number of “User Location Change” events triggered on PCC-service node.
Out Of Credit	Indicates the total number of “Out of Credit” events triggered on PCC-service node.
Reallocation of Credit	Indicates the total number of “Reallocation of Credit” events triggered on PCC-service node.
Revalidation timeout	Indicates the total number of timeout events triggered for “Revalidation” on PCC-service node.
IP Address Allocation	Indicates the total number of “IP Address Allocation” events triggered on PCC-service node.
IP Address Release	Indicates the total number of “IP Address Release” events triggered on PCC-service node.
Def EPS Bearer QoS Change	Indicates the total number of QoS change events triggered for Default EPS bearer on PCC-service node.
AN-GW Change	Indicates the total number of “AN-GW (Access Network Gateway)” events triggered on PCC-service node.
Successful Resource Alloc	Indicates the total number of “Successful Resource Allocation” events triggered on PCC-service node.
Resource Modification Req	Indicates the total number of resource modification request messages received by PCC-service node.
PGW Trace Control	Indicates the status of subscriber session trace control reported on PCC-service node for P-GW.

Field	Description
UE Timezone Change	Indicates the total number of “UE Timezone Change” events triggered on PCC-service node.
Usage Report	Indicates the total number of Usage Reports processed on PCC-service node.

Chapter 134

show pcc-sp-endpoint

This chapter describes the output of the `show pcc-sp-endpoint` command.

show pcc-sp-endpoint all

Table 345. show pcc-sp-endpoint all Command Output Description

Variables	Description
SP Endpoint Name	The name of the PCC-Sp-Endpoint instance for which statistics are displayed.
Context	The name of the context in which PCC-Sp-Endpoint instance is configured.
Address	Indicates the local IP address of PCC-Sp-Endpoint instance.
Access Type	Indicates the type of access, Diameter or Lightweight Directory Access Protocol (LDAP) used by a PCC-Sp-Endpoint instance for Sp interface procedures. By default it is Diameter.
SPR Subscriber Identifier	Indicates the subscriber identifier (imsi / msisdn / nai) used by PCC-Sp-Endpoint instance in SSC database while requesting subscriber data from SSC.
User-Name	Indicates the subscriber user name used by PCC-Sp-Endpoint instance in SSC database while requesting subscriber data from SSC.
Password	Indicates the password used by PCC-Sp-Endpoint instance in SSC database while requesting subscriber data from SSC.
LDAP Dn	Indicates the name of the LDAP Dn used by PCC-Sp-Endpoint instance.
Diameter Endpoint	Indicates the name of the Diameter origin endpoint configured for PCC-Sp-Endpoint instance.
Profile update notification	Indicates whether profile update notifications is allowed or not for a PCC-Sp-Endpoint instance.
Profile-data key data-reference	Indicates the data-reference values used in UDR/SNR message for profile data sent over Sp endpoint when access type is set to Diameter.
Profile-data key service-indication	Indicates the service indication values used in UDR/SNR message for profile data sent over Sp endpoint when access type is set to Diameter.

Chapter 135

show pdg-service

This chapter describes the output of the `show pdg-service` command.

show pdg-service all

Table 346.show pdg-service all Command Output Description

Field	Description
Service name	The name of the PDG service.
Context name	The name of the context in which the PDG service resides.
Bind	Displays the bind status for the PDG service for binding the service to a crypto template.
Max sessions	The maximum number of sessions supported by the PDG service.
IP address	The IPv4 address of the PDG service.
UDP Port	The UDP port number associated with the IP address.
Service State	The current state of the PDG service.
Crypto-template	The name of the crypto template bound to the FNG service.
SSL-template	The name of the SSL template bound to the FNG service. This is a customer-specific field.
SGTP Service	The name of the SGTP service bound to the PDG service.
SGTP Service context	The name of the context in which the SGTP service was created.
Session Setup Timeout(sec)	The maximum time allowed to set up a session in seconds.
Certificate Selection	The selection method for selecting the certificate to be included in the first IKE-AUTH message. Can be APN-based or crypto template-based.
PLMN Id	The PLMN identifiers for the PDG/TTG.
Duplicate Session Detection Type	The duplicate session detection type.
IP Source Violation - Drop Limit	The drop-limit value, which is the maximum number of allowed IP source violations within the detection period before dropping a call.
IP Source Violation - Period	The detection period in seconds for IP source violations.
IP Source Violation - Clear On Valid Packet	Displays whether the option to reset the drop-limit counters upon receipt of a properly addressed packet is enabled or disabled.
3gpp qos to dscp Downlink mapping	This group indicates the 3GPP QoS to DSCP downlink mapping information.
conversational	Indicates the DSCP configured for conversational type of traffic.
streaming	Indicates the DSCP configured for streaming type of traffic.
interactive (TP 1)	Indicates the DSCP configured for interactive type of traffic with traffic priority 1.
interactive (TP 2)	Indicates the DSCP configured for interactive type of traffic with traffic priority 2.
interactive (TP 3)	Indicates the DSCP configured for interactive type of traffic with traffic priority 3.
background	Indicates the DSCP configured for background type of traffic.

Field	Description
3GPP qos to dscp Downlink mapping based on Alloc. Prio	This group indicates the 3GPP QoS to DSCP downlink mapping information based on allocation priority.
interactive (TP 1, Alloc.P 1)	Indicates the DSCP configured for interactive type of traffic with traffic priority 1 and allocation priority 1.
interactive (TP 1, Alloc.P 2)	Indicates the DSCP configured for interactive type of traffic with traffic priority 1 and allocation priority 2.
interactive (TP 1, Alloc.P 3)	Indicates the DSCP configured for interactive type of traffic with traffic priority 1 and allocation priority 3.
interactive (TP 2, Alloc.P 1)	Indicates the DSCP configured for interactive type of traffic with traffic priority 2 and allocation priority 1.
interactive (TP 2, Alloc.P 2)	Indicates the DSCP configured for interactive type of traffic with traffic priority 2 and allocation priority 2.
interactive (TP 2, Alloc.P 3)	Indicates the DSCP configured for interactive type of traffic with traffic priority 2 and allocation priority 3.
interactive (TP 3, Alloc.P 1)	Indicates the DSCP configured for interactive type of traffic with traffic priority 3 and allocation priority 1.
interactive (TP 3, Alloc.P 2)	Indicates the DSCP configured for interactive type of traffic with traffic priority 2 and allocation priority 2.
interactive (TP 2, Alloc.P 3)	Indicates the DSCP configured for interactive type of traffic with traffic priority 3 and allocation priority 2.
3gpp qos to dscp Uplink mapping (TTG only)	This group indicates the 3GPP QoS to DSCP uplink mapping information.
conversational	Indicates the DSCP configured for conversational type of traffic.
streaming	Indicates the DSCP configured for streaming type of traffic.
interactive (TP 1)	Indicates the DSCP configured for interactive type of traffic with traffic priority 1.
interactive (TP 2)	Indicates the DSCP configured for interactive type of traffic with traffic priority 2.
interactive (TP 3)	Indicates the DSCP configured for interactive type of traffic with traffic priority 3.
background	Indicates the DSCP configured for background type of traffic.
3GPP qos to dscp Uplink mapping based on Alloc. Prio	This group indicates the 3GPP QoS to DSCP downlink mapping information based on allocation priority.
interactive (TP 1, Alloc.P 1)	Indicates the DSCP configured for interactive type of traffic with traffic priority 1 and allocation priority 1.
interactive (TP 1, Alloc.P 2)	Indicates the DSCP configured for interactive type of traffic with traffic priority 1 and allocation priority 2.
interactive (TP 1, Alloc.P 3)	Indicates the DSCP configured for interactive type of traffic with traffic priority 1 and allocation priority 3.
interactive (TP 2, Alloc.P 1)	Indicates the DSCP configured for interactive type of traffic with traffic priority 2 and allocation priority 1.

Field	Description
interactive (TP 2, Alloc.P 2)	Indicates the DSCP configured for interactive type of traffic with traffic priority 2 and allocation priority 2.
interactive (TP 2, Alloc.P 3)	Indicates the DSCP configured for interactive type of traffic with traffic priority 2 and allocation priority 3.
interactive (TP 3, Alloc.P 1)	Indicates the DSCP configured for interactive type of traffic with traffic priority 3 and allocation priority 1.
interactive (TP 3, Alloc.P 2)	Indicates the DSCP configured for interactive type of traffic with traffic priority 3 and allocation priority 2.
interactive (TP 3, Alloc.P 3)	Indicates the DSCP configured for interactive type of traffic with traffic priority 3 and allocation priority 3.

show pdg-service statistics

Table 347. show pdg-service statistics Command Output Description

Field	Description
Session Stats	
Current sessions total	Total number of sessions in progress including transient sessions.
Direct-IP-IPv4 current	Total number of currently active Direct IP IPv4 sessions.
TTG-IPv4 current	Total number of currently active TTG IPv4 sessions.
Active current	Total number of currently active sessions.
Dormant current	Total number of currently dormant sessions.
Active IPv4 current	Total number of currently active IPv4 sessions.
Active IPv6 current	Total number of currently active IPv6 sessions.
Dormant IPv4 current	Total number of currently dormant IPv4 sessions.
Dormant IPv6 current	Total number of currently dormant IPv6 sessions.
Total Direct-IP IPv4	Total number of Direct IP IPv4 sessions.
Total TTG IPv4	Total number of TTG IPv4 sessions.
Direct-IP IPv4 attempts	Total number of Direct IP IPv4 attempts.
Direct-IP IPv4 successes	Total number of Direct IP IPv4 successes.
Direct-IP IPv4 failures	Total number of Direct IP IPv4 failures.
TTG IPv4 attempts	Total number of TTG IPv4 attempts.
TTG IPv4 successes	Total number of TTG IPv4 successes.
TTG IPv4 failures	Total number of TTG IPv4 failures.
Total setup attempts	Total number of session setup attempts.
Total setup success	Total number of successful session attempts.
Total Attempts Failed	Total number of failed session attempts.
Total disconnected	Total number of sessions released locally and remotely.

Field	Description
Disconnect locally	Total number of sessions released locally.
Disconnect remotely	Total number of sessions released remotely.
Disconnect remotely before connect	Total number of sessions released remotely before connecting.
Reauthentication Stats	
Total reauth attempts	Total number of reauthentication attempts.
Total reauth success	Total number of reauthentication successes.
Total reauth failure	Total number of reauthentication failures.
Session Attempts Failed Disconnect reason	
Remote disconnect	Number of session attempts failed before the call is in the CONNECTED state due to a remote disconnect.
Admin disconnect	Number of session attempts failed before the call is in the CONNECTED state due to a disconnect by the administrator.
Session setup timeout	Number of session attempts failed before the call is in the CONNECTED state because the Session Manager's session setup timer has timed out.
No resource	Number of session attempts failed before the call is in the CONNECTED state because the system has run out of resources (flows, memory resources, etc.).
Auth failure	Number of session attempts failed before the call is in the CONNECTED state because of an AAA authentication failure.
Flow add failure	Number of session attempts failed before the call is in the CONNECTED state because a flow could not be added on the NPU.
Invalid dest-context	Number of session attempts failed before the call is in the CONNECTED state because the destination context received from the AAA server is invalid.
GTP	Number of session attempts failed before the call is in the CONNECTED state because of a GTP failure.
Duplicate request	Number of session attempts failed before the call is in the CONNECTED state because of duplicate requests.
Addr assign failure	Number of session attempts failed before the call is in the CONNECTED state because no remote IP address has been assigned.
Miscellaneous reasons	Number of session attempts failed because of miscellaneous reasons, including all session setup failures due to SSL failures (for example, handshake failures, ssl-alert, ssl-bad-message), or an unknown APN case in which the TTG is unable to resolve the APN, and all remaining disconnect reasons before the call is in the CONNECTED state.
Session Disconnect reason	
Remote disconnect	Number of sessions disconnected after the call is in the CONNECTED state because of a remote disconnect.
Admin disconnect	Number of sessions disconnected after the call is in the CONNECTED state by the administrator.

Field	Description
Idle timeout	Number of sessions disconnected after the call is in the CONNECTED state because the Idle timer has timed out.
Absolute timeout	Number of sessions disconnected after the call is in the CONNECTED state because the Absolute timer has timed out.
Long duration timeout	Number of sessions disconnected after the call is in the CONNECTED state because the Long Duration timer has timed out.
Re-Auth failure	Number of sessions disconnected after the call is in the CONNECTED state because of a re-authentication failure.
Source address violation	Number of sessions disconnected after the call is in the CONNECTED state because the source IP address is invalid.
GTP	Number of GTP sessions disconnected after the call is in the CONNECTED state.
Duplicate request	Number of sessions disconnected after the call is in the CONNECTED state because of duplicate requests.
Miscellaneous reasons	Number sessions disconnected after the call is in the CONNECTED state because of miscellaneous reasons.
Data Stats	
Total Bytes Sent	Total number of bytes sent.
Total Packets Sent	Total number of packets sent.
Total Bytes Rcvd	Total number of bytes received.
Total Packets Rcvd	Total number of packets received.
Total Packets Violations	Total number of packet violations.
EAP Server Statistics	
Total Received	Total number of EAP messages received from the EAP server in pass-through mode.
Success Received	Total Number of EAP success messages received from the EAP server in pass-through mode.
Challenge Received	Total number of EAP challenge messages received from the EAP server in pass-through mode.
Failures Received	Total number of EAP failure messages received from the EAP server in pass-through mode.
Total Sent	Total number of EAP messages transmitted to the EAP server in pass-through mode.
Initial Requests	Total number of initial EAP messages transmitted to the EAP server in pass-through mode.
Requests Forwarded	Total number of EAP requests forwarded to the EAP server in pass-through mode.
EAP Mobile Stats	
Total Received	Total number of EAP messages received from the UEs in pass-through mode.
Discarded	Total number of EAP messages received from the UEs in pass-through mode.

Chapter 136

show pdif-service

This chapter describes the output of the `show pdif-service` command.

show pdf-service statistics

Table 348. show pdf-service statistics Command Output Descriptions

Field	Description
Session Statistics	
Current sessions total	Total number of current sessions.
Simple-IPv4 current	Number of current Simple-IPv4 sessions.
Mobile-IPv4 current	Number of current Mobile-IPv4 sessions.
Proxy-Mobile-IPv4 current	Number of current Proxy-Mobile-IPv4 sessions.
Data-Clients	Total number of subscriber sessions originating from data clients.
Active current	Total number of currently active sessions.
Dormant current	Total number of currently dormant sessions.
Active IPv4 current	Total number of currently active IPv4 sessions.
Active IPv6 current	Total number of currently active IPv6 sessions.
Dormant IPv4 current	Total number of currently dormant IPv4 sessions.
Dormant IPv6 current	Total number of currently dormant IPv6 sessions.
Total Simple-IP IPv4	Total number of Simple-IP IPv4 sessions.
Total Mobile-IP IPv4	Total number of Mobile-IP IPv4 sessions.
Total Proxy-Mobile-IP IPv4	Total number of Proxy-Mobile-IP IPv4 sessions.
Mobile-IP IPv4 attempts	Total number of Mobile-IP IPv4 session attempts.
Mobile-IP IPv4 successes	Number of successful Mobile-IP IPv4 session attempts.
Mobile-IP IPv4 failures	Number of failed Mobile-IP IPv4 session attempts.
Proxy-Mobile-IP IPv4 attempts	Total number of Proxy-Mobile-IP IPv4 session attempts.
Proxy-Mobile-IP IPv4 succ	Number of successful Proxy-Mobile-IP IPv4 session attempts.
Proxy-Mobile-IP IPv4 fails	Number of failed Proxy-Mobile-IP IPv4 session attempts.
Simple-IP-Fallback attempts	Total number of Simple-IP fallback attempts.
successes	Number of successful Simple-IP fallback sessions.
failures	Number of failed Simple-IP fallback sessions.
Simple-IP-Fallback Failure Reasons	
No Mobile-IP RRQ Rx	Mobile-IP RRQ request not received.
Not allowed	Simple-IP fallback not allowed by configuration.

Field	Description
Tagged Pool Address	Address is in a pool and tagged not to allow Simple-IP fallback.
Misc	
Simple-IP IPv4 attempts	Total number of Simple-IP IPv4 session attempts.
Simple-IP IPv4 successes	Number of successful Simple-IP IPv4 attempts.
Simple-IP IPv4 failures	Number of failed Simple-IP IPv4 attempts.
Total setup attempts	Total number of session setup attempts.
Total setup success	Number of successful session setup attempts.
Total Attempts Failed	Number of failed session setup attempts.
Total disconnected	Total number of disconnected sessions.
Disconnected locally	Number of sessions disconnected locally.
Disconnected remotely	Number of sessions disconnected remotely.
Disconnect remotely before connect	Number of sessions disconnected remotely before the session was fully connected.
Session Disconnect Reasons	
Remote disconnect ipsec	Number of sessions disconnected because of remote party (mobile) hang-up.
Admin disconnect	Number of sessions disconnected by the Admin.
Idle timeout	Number of sessions disconnected because the Idle timer has timed out.
Absolute timeout	Number of sessions disconnected because the Absolute timer has timed out.
Long duration timeout	Number of sessions disconnected because the Long Duration timer has timed out.
Session setup timeout	Number of sessions disconnected because the Session Setup timer has timed out.
No resource	Number of sessions disconnected because the system has run out of resources (flows, memory, etc.).
Auth failure	Number of sessions disconnected because of an authentication failure.
Flow add failure	Number of sessions disconnected because flow could not be added on NPU.
Invalid dest-context	Number of sessions disconnected because the destination context coming from AAA server is invalid.
Source address violation	Number of sessions disconnected because the source IP address is invalid.
MIP Remote	Number of Mobile-IP sessions disconnected because of remote mobile user hang-up.
MIP Local	Number of Mobile-IP sessions disconnected locally.
Duplicate Request	Number of sessions disconnected because of a duplicate request when there is already a session with the same NAI.
MAC validation failure	Number of sessions disconnected because the HSS cannot validate MAC address from remote user.
Addr assign failure	Number of sessions disconnected because no address has been assigned.

Field	Description
Miscellaneous reasons	Number of Mobile-IP sessions disconnected for other reasons.
MAC Address Validation Statistics	
Validation attempted	Total number of MAC address validation attempts.
Validation succeeded	Number of successful MAC address validation attempts.
Validation failed	Number of failed MAC address validation attempts.
MAC Address Validation Successes	
MAC Address matches	Number of successful HSS server MAC address matches.
HSS failure continued	HSS is configured to continue the session after a failure is registered.
MAC Address Validation Failure Reasons	
Diameter Error	Validation failed because of a problem with the Diameter server.
User Unknown	Validation failed because of an unknown user.
Malformed MAC Address	Validation failed because of a malformed MAC address from the mobile subscriber.
No MAC Address provided	Validation failed because the mobile subscriber does not supply a MAC address.
Unauthorized MAC Address	Validation failed because the MAC address is not authorized by the HSS.
Sh Interface unavailable	Validation failed because of a problem with the interface to the HSS.
Others	Validation failed because of other reasons.
Data Stats	
Total Bytes Sent	Total number of bytes sent.
Total Packets Sent	Total number of packets sent.
Total Bytes Rcvd	Total number of bytes received.
Total Packets Rcvd	Total number of packets received.
Total Pkts Violations	Total number of packets received from UEs and destined for the Internet that do not match any of the configured traffic selectors.
EAP Server Statistics	
Total Received	Total number of EAP Success+ EAP Challenge+ EAP Failures, coming from EAP server.
Success Received	Number of EAP successes received.
Challenge Received	Number of EAP challenges received.
Failures Received	Number of EAP failures received.
Discarded	Number of EAP server messages discarded.
Total Sent	Total number of EAP server messages sent.
Initial Requests	Number of initial requests.
Requests Forwarded	Number of requests forwarded.

Field	Description
EAP Mobile Statistics	
Total Received	Total number of EAP Requests coming from mobile subscriber.
Discarded	Number of EAP mobile messages discarded.

Chapter 137

show pgw

This chapter describes the output of the **show pgw** command.

show pgw-service all

Displays configuration information for all P-GW services configured on the system.

Table 349. show pgw-service all Command Output Descriptions

Field	Description
Service name	The name of the P-GW service configured and running on the system.
Service-ID	The system-generated identification number associated with the P-GW service name.
Context	The context name where the P-GW service is configured.
Accounting Context	The context name where the accounting configuration and/or interface(s) are configured.
Accounting gtp group	Displays all the configured GTP server groups associated with this service for accounting.
Status	Indicates whether the P-GW service is started or not.
Restart Counter	Specifies the restart counter.
EGTP Service	The eGTP service name configured for use by this service.
LMA Service	The LMA service name configured for use by this service.
GGSN Service	The GGSN service name associated with this service.
Session-Delete-Delay Timer	Indicates whether there is a delay in terminating a session.
Session-Delete-Delay Timeout	Specifies the time (msecs) to retain a session before terminating it.
PLMN ID List	The Public Land Mobile Network identifier list associated with this P-GW service. A PLMN contains a Mobile Country Code (MCC) and Mobile Network Code (MNC). Up to five PLMN IDs can be configured for each P-GW service.
Newcall Policy	The newcall policy configured for this P-GW service. Specifies whether the P-GW will accept or reject requests for a static IP address if the address is already in use by another session.
dns-client Context Name	The context where the DNS client is configured and used by this service.
gx-li context	Refer to the <i>Lawful Intercept Configuration Guide</i> .
gx-li transport	Refer to the <i>Lawful Intercept Configuration Guide</i> .
QCI-QoS Mapping Table Name	The QoS Class Index to QoS mapping table configured for use with this service.
Authorize	Enables/disables subscriber session authorization with HSS over S6b Diameter interface.
Duplicate Subscriber Addr Request	Specifies whether the P-GW will accept or reject requests for a static IP address if the address is already in use by another session.

Field	Description
Fqdn-name	The name of Fully Qualified Domain Name (FQDN) which is used for authorization over S6b interface between P-GW and 3GPP AAA/HSS.
SAEGW service	Specifies whether P-GW service is part of SAEGW service.

show pgw-service statistics all

Table 350. show pgw-service statistics all Command Output Descriptions

Field	Description
Subscriber session statistics	
Total bearers active	
Default bearers	The total number of active default bearers using the P-GW service(s) on this system.
Dedicated bearers	The total number of active dedicated bearers using the P-GW service(s) on this system. This counter increments for both network and UE-initiated dedicated bearers.
Total bearers setup	
Default bearers	The total number of default bearers setup using the P-GW service(s) on this system.
Dedicated bearers	The total number of dedicated bearers setup using the P-GW service(s) on this system. This counter increments for both network and UE-initiated dedicated bearer setup.
Total bearers released	
Default bearers	The total number of default bearers released using the P-GW service(s) on this system.
Network initiated release	
Admin disconnect	The total number of default bearers released due to an administrative disconnect using the P-GW service(s) on this system.
GTP-U error ind	The total number of default bearers released due to a GTP-U error indication using the P-GW service(s) on this system.
SGW Path failure	The total number of default bearers released due to an S-GW path failure using the P-GW service(s) on this system.
MME Initiated release	The total number of default bearers released due to an MME initiated release using the P-GW service(s) on this system.
Dedicated bearers	The total number of dedicated bearers released using the P-GW service(s) on this system.
Network initiated release	
Admin disconnect	The total number of dedicated bearers released due to an administrative disconnect using the P-GW service(s) on this system.
GTP-U error ind	The total number of dedicated bearers released due to a GTP-U error indication using the P-GW service(s) on this system.
MME initiated release	The total number of dedicated bearers released due to an MME initiated release using the P-GW service(s) on this system.
Default bearer release	The total number of dedicated bearers released due to a default bearer release using the P-GW service(s) on this system.
Total bearers release failure	

Field	Description
Default bearers	The total number of default bearer release failures using the P-GW service(s) on this system.
Dedicated bearers	The total number of dedicated bearer release failures using the P-GW service(s) on this system.
Total bearers rejected:	
Default bearers	The total number of default bearers rejected using the P-GW service(s) on this system.
No Resource	The total number of default bearers rejected due to a no resource condition using the P-GW service(s) on this system.
Missing or unknown APN	The total number of default bearers rejected due to a missing or unknown APN using the P-GW service(s) on this system.
APN selection-Mode mismatch	The total number of default bearers rejected due to an APN selection mode mismatch using the P-GW service(s) on this system.
Pref PDN-Type not supported	The total number of default bearers rejected due to a preferred PDN type not supported condition using the P-GW service(s) on this system.
APN restr violation	The total number of default bearers rejected due to an APN restriction violation using the P-GW service(s) on this system.
Subs auth failed	The total number of default bearers rejected due to a subscriber authentication failure using the P-GW service(s) on this system.
Subs static addr not allowed	The total number of default bearers rejected due to a disallowed subscriber static IP address using the P-GW service(s) on this system.
Subs static addr not alloc	The total number of default bearers rejected due to an unallocated subscriber static IP address using the P-GW service(s) on this system.
Dynamic addr not alloc	The total number of default bearers rejected due to an unallocated dynamic IP address using the P-GW service(s) on this system.
Subs static addr not present	The total number of default bearers rejected due to a missing subscriber static IP address using the P-GW service(s) on this system.
Dedicated bearers	The total number of dedicated bearers rejected using the P-GW service(s) on this system.
UE-req reject	The total number of UE-requested dedicated bearers rejected using the P-GW service(s) on this system.
Network-req reject	The total number of network-requested dedicated bearers rejected using the P-GW service(s) on this system.
Total bearers modified	
UE-initiated modification	The total number of UE-initiated bearers modified using the P-GW service(s) on this system.
QOS modification	The total number of UE-initiated bearers with a QoS modification using the P-GW service(s) on this system.
TFT modification	The total number of UE-initiated bearers with a TFT modification using the P-GW service(s) on this system.
Network-initiated modification	The total number of network-initiated bearers modified using the P-GW service(s) on this system.

Field	Description
QOS modification	The total number of network-initiated bearers with a QoS modification using the P-GW service(s) on this system.
TFT modification	The total number of network-initiated bearers with a TFT modification using the P-GW service(s) on this system.
Total bearers modification failure	
UE-initiated mod failed	The total number of UE-initiated bearer modification failures using the P-GW service(s) on this system.
QOS mod fail	The total number of UE-initiated bearer modification failures due to QoS modification failures using the P-GW service(s) on this system.
Semantic err in TFT oper	The total number of UE-initiated bearer modification failures due to semantic errors in a TFT operation using the P-GW service(s) on this system.
Syntact err in TFT oper	The total number of UE-initiated bearer modification failures due to syntactic errors in a TFT operation using the P-GW service(s) on this system.
Semantic err in pkt filter	The total number of UE-initiated bearer modification failures due to semantic errors in a packet filter using the P-GW service(s) on this system.
Syntact err in pkt filter	The total number of UE-initiated bearer modification failures due to syntactic errors in a packet filter using the P-GW service(s) on this system.
Network-initiated mod failed	The total number of network-initiated bearer modification failures using the P-GW service(s) on this system.
QOS mod fail	The total number of network-initiated bearer modification failures due to QoS modification failures using the P-GW service(s) on this system.
Semantic err in TFT oper	The total number of network-initiated bearer modification failures due to semantic errors in a TFT operation using the P-GW service(s) on this system.
Syntact err in TFT oper	The total number of network-initiated bearer modification failures due to syntactic errors in a TFT operation using the P-GW service(s) on this system.
Semantic err in pkt filter	The total number of network-initiated bearer modification failures due to semantic errors in a packet filter using the P-GW service(s) on this system.
Syntact err in pkt filter	The total number of network-initiated bearer modification failures due to syntactic errors in a packet filter using the P-GW service(s) on this system.
Total PDN-Type stats	
PDN-Type IPv4 sessions	The total number of PDN-type IPv4 sessions using the P-GW service(s) on this system.
Active	The total number of active PDN-type IPv4 sessions using the P-GW service(s) on this system.
Setup	The total number of setup PDN-type IPv4 sessions using the P-GW service(s) on this system.
Released	The total number of released PDN-type IPv4 sessions using the P-GW service(s) on this system.
PDN-Type IPv6 sessions	The total number of PDN-type IPv6 sessions using the P-GW service(s) on this system.
Active	The total number of active PDN-type IPv6 sessions using the P-GW service(s) on this system.

Field	Description
Setup	The total number of setup PDN-type IPv6 sessions using the P-GW service(s) on this system.
Released	The total number of released PDN-type IPv6 sessions using the P-GW service(s) on this system.
PDN-Type IPv4v6 sessions	The total number of PDN-type IPv4v6 sessions using the P-GW service(s) on this system.
Active	The total number of active PDN-type IPv4v6 sessions using the P-GW service(s) on this system.
Setup	The total number of setup PDN-type IPv4v6 sessions using the P-GW service(s) on this system.
Released	The total number of released PDN-type IPv4v6 sessions using the P-GW service(s) on this system.
IP address allocation statistics	
Total IPv4 addrs allocated	The total number of IPv4 addresses allocated using the P-GW service(s) on this system.
Local pool add assign	The total number of local IP pool IPv4 addresses allocated using the P-GW service(s) on this system.
Static addr assign	The total number of static IPv4 addresses allocated using the P-GW service(s) on this system.
Radius provided addr assign	The total number of RADIUS-provided IPv4 addresses allocated using the P-GW service(s) on this system.
Total IPv6 addrs allocated	The total number of IPv6 addresses allocated using the P-GW service(s) on this system.
Stateless auto config	The total number of stateless address auto configuration IPv6 addresses allocated using the P-GW service(s) on this system.
SGi tunneling statistics	
Total IPv4 tunnel sessions	The total number of IPv4 tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
IP-in-IP tun sessn active	The total number of active IP-in-IP tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
IP-in-IP tun sessions setup	The total number of setup IP-in-IP tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
IP-in-IP tun sessions released	The total number of released IP-in-IP tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
GRE-tun sessions active	The total number of active GRE tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
GRE-tun sessions setup	The total number of setup GRE tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
GRE-tun session release	The total number of released GRE tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
Total IPv6 tunneled sessions	The total number of IPv6 tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
6to4 tun sessions active	The total number of active IPv4-in-IPv6 tunnel sessions using the P-GW service(s) SGi interface(s) on this system.

Field	Description
6to4 tun session setup	The total number of setup IPv4-in-IPv6 tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
6to4 tun sessions released	The total number of released IPv4-in-IPv6 tunnel sessions using the P-GW service(s) SGi interface(s) on this system.
Subscriber PLMN Statistics	
Home subscribers sessions	The total number of home subscriber sessions using the P-GW service(s) on this system.
Sessions active	The total number of active home subscriber sessions using the P-GW service(s) on this system.
Sessions setup	The total number of setup home subscriber sessions using the P-GW service(s) on this system.
Sessions released	The total number of released home subscriber sessions using the P-GW service(s) on this system.
Roaming subscribers sessions	The total number of roaming subscriber sessions using the P-GW service(s) on this system.
Sessions active	The total number of active roaming subscriber sessions using the P-GW service(s) on this system.
Sessions setup	The total number of setup roaming subscriber sessions using the P-GW service(s) on this system.
Sessions released	The total number of released roaming subscriber sessions using the P-GW service(s) on this system.
Visiting subscribers sessions	The total number of visiting subscriber sessions using the P-GW service(s) on this system.
Sessions active	The total number of active visiting subscriber sessions using the P-GW service(s) on this system.
Sessions setup	The total number of setup visiting subscriber sessions using the P-GW service(s) on this system.
Sessions released	The total number of released visiting subscriber sessions using the P-GW service(s) on this system.
Subscriber QoS Statistics	
Total bearers active	
QCI 1 - 9	The total number of active bearers with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of active bearers with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of active bearers with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Total bearers setup	
QCI 1 - 9	The total number of setup bearers with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of setup bearers with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of setup bearers with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Total bearers released	
QCI 1 - 9	The total number of released bearers with a QoS Class Index using the P-GW service(s) on this system.

Field	Description
Non-Std QCI (Non-GBR)	The total number of released bearers with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of released bearers with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Subscriber Data Statistics	
Total Uplink packets forwarded	
QCI 1 - 9	The total number of uplink packets forwarded with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of uplink packets forwarded with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of uplink packets forwarded with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Total Uplink bytes forwarded	
QCI 1 - 9	The total number of uplink bytes forwarded with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of uplink bytes forwarded with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of uplink bytes forwarded with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Total Downlink packets forwarded	
QCI 1 - 9	The total number of downlink packets forwarded with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of downlink packets forwarded with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of downlink packets forwarded with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Total Downlink bytes forwarded	
QCI 1 - 9	The total number of downlink bytes forwarded with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of downlink bytes forwarded with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of downlink bytes forwarded with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Total Uplink packets dropped	
QCI 1 - 9	The total number of uplink packets dropped with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of uplink packets dropped with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.

Field	Description
Non-Std QCI (GBR)	The total number of uplink packets dropped with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Total Uplink bytes dropped	
QCI 1 - 9	The total number of uplink bytes dropped with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of uplink bytes dropped with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of uplink bytes dropped with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Total Downlink packets dropped	
QCI 1 - 9	The total number of downlink packets dropped with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of downlink packets dropped with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of downlink packets dropped with a non-standard QCI (GBR) using the P-GW service(s) on this system.
Total Downlink bytes dropped	
QCI 1 - 9	The total number of downlink bytes dropped with a QoS Class Index using the P-GW service(s) on this system.
Non-Std QCI (Non-GBR)	The total number of downlink bytes dropped with a non-standard QCI (non-GBR) using the P-GW service(s) on this system.
Non-Std QCI (GBR)	The total number of downlink bytes dropped with a non-standard QCI (GBR) using the P-GW service(s) on this system.

Chapter 138

show port

This chapter describes the output of the `show port` command.

show port datalink counters

Table 351. show port datalink counters Command Output Descriptions

Field	Description
Counters for port	The port for which the counters are displayed. The very next line displays the type of line card that the port belongs to.
RX Counters	
RX Unicast frames	The number of Unicast frames received.
RX Multicast frames	The number of Multicast frames received.
RX Broadcast frames	The number of Broadcast frames received.
RX Size	The number of times that data was received according to number of frames that comprised it. The number of frames are categorized into the following ranges: - 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 1518 - Greater than 1518
RX OverSize frames	The number of oversized frames received.
RX Bytes OK	The number of bytes that were received without error.
RX Bytes BAD	The number of bytes that were received with errors.
RX OVF	The number of overflows received.
RX SHORT OK ASR 5000 only	The number of frames, less than 64 bytes in length, received without any error.
RX SHORT CRC ASR 5000 only	The number of frames, less than 64 bytes in length, received with cyclical redundancy check (CRC) error.
RX NO SFD ASR 5000 only	The number of frames received without start frame delimiter (SFD) detection but with carrier assertion.
RX NORM CRC	The number of frames, with lengths between 64 bytes and the maximum frame size, received with an integral number of bytes and a cyclical redundancy check (CRC) error.
RX NORM ALI ASR 5000 only	The number of frames, with lengths between 64 bytes and the maximum frame size, received with a non-integral number of bytes and a cyclical redundancy check (CRC) error.
RX LONG OK	The number of frames, larger than the maximum frame size, received without any error.

Field	Description
RX LONG CRC	The number of frames, larger than the maximum frame size, received with CRC error.
RX PAUSE	The number of correct received flow-control frames.
RX FALS CRS	The number of false carrier events detected.
RX SYM ERR	The number of received frames during which physical (PHY) symbol errors were detected.
RX GPCS ERR ASR 5000 only	The number of received frames during which physical (PHY) symbol errors were detected.
Tx Counters	
TX Unicast frames	The number of Unicast frames transmitted.
TX Multicast frames	The number of Multicast frames transmitted.
TX Broadcast frames	The number of Broadcast frames transmitted.
TX Size	The number of times that data was transmitted according to the number of frames that comprised it. The number of frames are categorized into the following ranges: - 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 1518 - Greater than 1518
TX Bytes OK	The number of bytes that were transmitted without error.
TX Bytes BAD	The number of bytes that were transmitted with errors.
TX DEFER ASR 5000 only	The number of frames deferred upon the first transmit attempt due to a busy line.
TX COL ASR 5000 only	The number of regular collision events occurring during transmission.
TX SCOL ASR 5000 only	The number of frames transmitted without any error following a single collision.
TX MCOL ASR 5000 only	The number of frames transmitted without any error following multiple collision.
TX XCOL ASR 5000 only	The number of frames that have experienced 16 consecutive collisions or more.
TX LCOL ASR 5000 only	The number of transmission abortion due to a collision occurring after transmission of packets that are 64 bytes in length.
TX PAUSE	The number of correct transmitted flow-control frames.
TX ERR	The number of frames transmitted with an error due to transmit FIFO underflow or TXERR signal assertion

show port info

Displays detailed configuration and functional information for a specified interface port.

The command output varies depending on the type of port interface configured. Three tables are provided for the various port interface types available:

- Ethernet
- Frame Relay
- ATM

Table 352. show port info Command Output Descriptions for Ethernet Port Line Card

Field	Description
Port Type	The configured port type. Supported Ethernet port types and data transfer rates.
Role	The communication role played by this port. • Management Port: Port has been designated for remote management access. • Service Port: Port handles subscriber traffic.
Description	The textual description given to the port during software configuration. If no description was configured, (None Set) appears in this field.
Controlled By Card ASR 5000 only	The slot number and type of the front-installed application card to which this Ethernet line card is mapped.
Redundancy Mode	The redundancy mode configured for this Ethernet line card port. Possible redundancy modes are: • Card: No redundancy will be used. • Port: Port redundancy will be used.
Framing Mode	Ethernet
Redundant With	The slot number and port number of the Ethernet card that is redundant with this Ethernet line card. If a redundant port is not available, None appears in this field.
Preferred Port	Indicates if this card will assume revertive (auto-recovery) redundancy functionality should this line card be brought back into service after a failure.
Physical ifIndex	The static identification number for the slot/port combination on this Line Card. This ID is used in SNMP traps sent when the link status of the Ethernet port goes up or down.
Administrative State	Enabled indicates that this card has been configured for use via software.

Field	Description
Configured Duplex	Indicates the port's configured duplex mode. Possible modes are: • Auto: The port auto-detects the appropriate mode (Full- or Half-duplex) for communicating with the network. • Full duplex • Half duplex
Configured Speed	The maximum data rate configured for this port. Possible rates are: • Auto: The port auto-detects the appropriate data rate for communicating on the network. • 10 Mbps • 100 Mbps • 1000 Mbps (supported on Ethernet 1000 Line Cards, Quad Gigabit Ethernet Line Cards, and SPIO Cards.)
Configured Flow Control	Quad Gigabit Ethernet Line Card (QGLC) only: Enabled indicates that Ethernet MAC level flow control has been enabled for this Ethernet port. Note that this is not necessarily the operational state of flow control, as both sides of the connection must agree to flow control during Ethernet negotiation.
Interface MAC Address ASR 5500 only	The interface media access control (MAC) address for the port.
Fixed MAC Address ASR 5500 only	The fixed media access control (MAC) address for the port.
MAC Address ASR 5000 only	The media access control (MAC) address for the port. If Virtual MAC addressing is enabled, the MAC address is followed by (Virtual) .
Boxer Interface TAP ASR 5000 only	Indicates whether this interface has been tapped for debugging or simulation purposes.
Link State	The port's link status: Up or Down .
Link Duplex	The actual duplex mode (Auto , Full or Half) currently being used for the link.
Link Speed	The actual data rate currently being supported by the port.
Flow Control	Indicates the current <i>negotiated</i> state of Ethernet MAC level flow control (Enabled or Disabled . Also see Configured Flow Control above).
Link Aggregation Group	If this port is configured as part of a Link Aggregation Group (LAG), this field indicates the group number to which this port belongs and whether the port is a Master or a Member. If the port is not configured as part of a Link Aggregation Group, None appears in this field.
LAG Toggle Link	Yes indicates that the QGLC will generate "port link down" and "port link up" events for this LAG port.

Field	Description
LAG Redundancy Mode	If this port is configured as part of a LAG, this field indicates the Redundancy Mode configured for this Link Aggregation Group: • Standard: During failover to the redundant card the amount of bandwidth available will be reduced from what was available for the original LAG. • Switched: Used when the Active LAG ports are connected to different external switches in the service provider's network.
LAG Hold Time	If <i>LAG Redundancy Mode</i> is set to Switched, this field indicates the time, in seconds, that will elapse before the system determines that the failover LAG ports must be switched again. This prevents the system from switching rapidly back and forth between the cards during routine maintenance (for example when Ethernet cables are being removed and reconnected between cards).
Link Aggregation Master	If this port is configured as part of a LAG, this field identifies the slot and port number that is the Master of this Link Aggregation Group.
Link Aggregation State	Indicates the result of the LACP negotiation.
Untagged: <i>(No VLAN IDs have been configured)</i>	
Logical ifIndex	The dynamically assigned identification number for the IP interface bound to this port. This ID is used in SNMP traps sent when the IP interface goes up or down or switches between top and bottom line cards.
Operational State	The operational state and mode of the card, in the format <state,mode>. Possible operational states are Up or Down. Possible operational modes are: • Active: Indicates that the card is an active component that will be used to process subscriber data sessions. • Standby: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • Offline: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that the card is not installed correctly (for example, the card interlock switch is not locked) or that its software processes have been halted.
Tagged VLAN: <i>(VLAN IDs have been configured)</i>	
Logical ifIndex	The dynamically assigned identification number for the IP interface bound to this port. This ID is used in SNMP traps sent when the IP interface goes up or down or switches between top and bottom line cards.
VLAN Type	Subscriber indicates that the VLAN has been associated with a subscriber. Standard is not associated with a subscriber.
VLAN Priority	The value of the 802.1p priority bit as an integer from 0 through 7, with 7 being the highest priority. (ASN-GW only)
Administrative State	Enabled indicates that this card has been configured for use via software.

Field	Description
Operational State	The operational state and mode of the VLAN, in the format <state,mode>. Possible operational states are Up or Down. Possible operational modes are: • Active: Indicates that the card is an active component that will be used to process subscriber data sessions. • Standby: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • Offline: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that the card is not installed correctly (for example, the card interlock switch is not locked) or that its software processes have been halted.
Number of VLANs	The total number of VLANs associated with this port.
SFP Module	NOTE: This field appears only for Ethernet line cards that support the use of a small form-factor pluggable (SFP) transceiver module. Refer to the show hardware card command for additional information.

Table 353. show port info Command Output Descriptions for Frame Relay Port Line Card

Field	Description
Port Type	The configured port type: STM1/OC3 Channelized
Description	The textual description given to the port during software configuration. If no description was configured, (None Set) appears in this field.
Controlled By Card	The slot number and card type of front-installed application card to which this line card is mapped.
Redundancy Mode	The redundancy mode configured for this line card. Possible redundancy modes are: • Card Mode: No redundancy will be used. • Port Mode: Port redundancy will be used.
Framing Mode	SDH (default is E1) or SONET (default is DS1)
Redundant With	The slot number and port number of the line card that is redundant with this line card. If a redundant port is not available, None appears in this field.
Preferred Port	Indicates whether or not this card will assume revertive (auto-recovery) redundancy functionality should this card be brought back into service after a failure.
Physical ifIndex	The static identification number for the slot/port combination on this Line Card. This ID is used in SNMP traps sent when the link status of the Ethernet port goes up or down.
Administrative State	Enabled indicates that this card has been configured for use via software.
Link State	The port's link status: Up or Down .

Field	Description
Line Timing	Indicates whether or not this port has been configured to recover a timing clock from the line or port on the peer end of the connection for distribution to all chassis line cards. Line timing can be obtained from the following sources: • BITS: Line timing is recovered from the BITS port on the SPIO card • line-timing: Line timing is obtained through the line or port connected to the far end port. • internal clock: The line timing is obtained from the chassis' internal clock source. This internal clock is configured and enabled via the clock-source internal CLI command.
SFP Module	This field indicates if a small form-factor pluggable (SFP) module is installed on the card and its type. Possible SFP types are M5 or M6.
Path $\times$ el y or Path $\times$ ds1 y	Identifies a specific routing path configuration (configured with the path command) associated with a frame relay DLCI (data link connection identifier, configured with the dldci command). Information provided includes: • The exact mapping of containers (C), virtual containers (VC), tributary units (TU) and/or tributary unit groups (TUG) that is/are appropriate for the configured channel characteristics. For example: tu12-au3 1/1. • The framing mode being used. For ds1 the options are: esf (extended superframe), sf (superframe), and unframed. For e1 the options are: cas (standard mapping with CAS), cas-crc4 (CRC4 mapping with CAS), crc4 mapping and standard mapping. • The mapping mode being used (bit-sync or byte-sync). For each configured path being utilized, the following additional information also is provided (for release 8.1 and later, the following items are configured with the frame-relay command): • Timeslots: Identifies the number of timeslot groupings for multiple fractional DS1/E1 channels. The maximum number of timeslots that can be defined is 8. • Frame Relay Intf Type: Indicates the frame relay interface type: DCE (Data Communication Equipment), DTE (Data Terminal Equipment), or NNI (Network to Network interface). The default is DTE. • Frame Relay LMI Type: Indicates the frame relay local management interface (LMI) protocol type: ANSI, CISCO, Q933a, or None. • The default is None.

Field	Description
	• Frame Relay LMI n391: Indicates the number of keep-alive exchanges that will occur before the system requests a full status through the n391 local management interface. Possible values are 1 through 255. The default is 6. • Frame Relay LMI n392: Indicates the Error threshold value. It specifies the total number of errors within the event count specified by n393 local management interface to bring down the link. Possible values are 1 through 10 and default is 2. • Frame Relay LMI n393: Indicates the Monitored Events count. This monitored event count is set for the n392 local management interface. Possible values are 1 through 10. The default is 2. • Frame Relay DLCI: The specific Frame Relay PVC DLCI ID descriptor number associated with this path. • Logical ifindex: The dynamically assigned identification number for the IP interface bound to this Frame Relay PVC DLCI. This ID is used in SNMP traps sent when the IP interface goes up or down or switches between top and bottom line cards. • Admin State: Enabled Indicates that this Frame Relay DLCI PVC has been configured for use via software. • Operational State: The operational state and mode of the Frame Relay PVC DLCI, in the format <state,mode>. Possible operational states are Up or Down. Possible operational modes are: • Active: Indicates that the Frame Relay PVC DLCI is an active component that will be used to process subscriber data sessions.
	• Standby: Indicates that the Frame Relay PVC DLCI is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur • Offline: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that the card is not installed correctly (e.g., the card interlock switch is not locked) or that its software processes have been halted. • Shaping: Indicates the type of egress traffic shaping being used to control flow for this DLCI. Possible values are: cir (Committed Info Rate), cir-eir (Committed Info Rate with Excess Rate), ppr (Peak Packet Rate), and wfq (Weighted Fair Queueing). • Number of DLCI: The number of the Data Link Connection Identifier(s) (DLCI) associated with this timeslot. The DLCI is configured via the d1ci command. The DLCI identifies the virtual connection so the receiving end knows which information connection a frame belongs to. • Reserved Bandwidth: The amount of bandwidth (in bits per second) reserved for this E1 or DS1 path. • Number of DLCI: The total number of DLCIs associated with this port

Table 354. show port info Command Output Descriptions for ATM Line Card

Field	Description
Port Type	The configured port type: STM1/OC3 ATM .
Description	The description given to the port during software configuration. If no description was configured, (None Set) will be displayed.
Controlled By Card	The slot number and type of front installed application card to which this line card is mapped.
Redundancy Mode	The redundancy mode of the card. The possible modes are: • Normal: Normal card redundancy. • Port: Port redundancy will be used.
Framing Mode	SDH (default for E1) or SONET (default for DS1)
Redundant With	The slot number and port number of the line card that is redundant with this line card. If a redundant port is not available, None appears in this field.
Preferred Port	Indicates whether or not this card will assume revertive (auto-recovery) redundancy functionality should this card be brought back into service after a failure.
Physical ifIndex	The static identification number for a slot/port combination. This ID is used in SNMP traps sent when the link status of the port goes up or down.
Administrative State	Indicates whether or not the card has been configured for use via software. If it has been configured, Enabled appears in this field.
Link State	The link status, either Up or Down .
Line-timing	Indicates whether or not this port has been configured to recover a timing clock from the line or port on the peer end of the connection for distribution to all chassis line cards. Line timing can be obtained from the following sources: • BITS: Line timing is recovered from the BITS port on the SPIO card • line-timing: Line timing is obtained through the line or port connected to the far end port. • internal clock: The line timing is obtained from the chassis' internal clock source. This internal clock is configured and enabled via the clock-source internal CLI command.
SFP Module	This field indicates if a small form-factor pluggable (SFP) module is installed on the card and its type. Possible SFP types are M5 or M6.

Field	Description
PVC VPI xxx VCI yyy	Indicates the virtual path identifier (VPI) and virtual connection identifier (VCI) numbers configured for a Permanent Virtual Connection (PVC). For each defined PVC VPI and VCI, the following associated information also is provided: • Traffic Type: Either AAL2 (ATM Adaptation Layer 2) or AAL5 (ATM Adaptation Layer 5). The default is AAL5. • Logical ifIndex: The dynamically assigned identification number for the IP interface bound to this port. This ID is used in SNMP traps sent when the IP interface goes up or down or switches between top and bottom line cards. • Admin State: Enabled indicates that this port has been configured for use via software. • Operational State: The operational state and mode of the card, in the format <state,mode>. Possible operational states are Up or Down. Possible operational modes are: • Active: Indicates that the card is an active component that will be used to process subscriber data sessions. • Standby: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • Offline: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that the card is not installed correctly (e.g., the card interlock switch is not locked) or that its software processes have been halted. • Encapsulation: AAL5 llc-snap (logical link layer encapsulation) or AAL5 vc-mux (virtual circuit multiplexing).
	• Shaping: The type of traffic shaping (rates) configured for this PVC: cbr (constant bit rate), ubr (unspecified bit rate), ubr+ (unspecified bit rate with minimum cell rate) or vbr (variable bit rate).
Number of PVCs/CCs	The total number of PVCs configured for this port.
Reserved Bandwidth	The amount of bandwidth (in cells/second) reserved. The bandwidth can be utilized by a single PVC or it can span across multiple PVCs.

show port npu counters

Table 355. show port npu counters Command Output Descriptions

Field	Description
Counters for port	The port for which the counters are displayed. The very next line displays the type of line card that the port belongs to.
Unicast	The number of Unicast frames and bytes received and transmitted.
Multicast	The number of Multicast frames and bytes received and transmitted.
Broadcast	The number of Broadcast frames and bytes received and transmitted.
IPv4 unicast	The number of Unicast IP version 4 frames and bytes received and transmitted.
IPv4 non-unicast	The number of non-Unicast IP version 4 frames and bytes received and transmitted.
IPv6 unicast	The number of Unicast IP version 6 frames and bytes received and transmitted.
IPv6 non-unicast	The number of non-Unicast IP version 6 frames and bytes received and transmitted.
Fragments received	The number of packet fragments qualified for re-assembly.
Packets reassembled	The number of packets that were successfully re-assembled.
Fragments to kernel	The number of qualified packet fragments that were sent to the kernel for re-assembly.
HW error	The number of packets discarded due to first-in, first-out (FIFO) overrun or underrun.
Port non-operational	The number of packets discarded due to port not operational.
SRC MAC is multicast	The number of packets discarded due to source MAC address is multicast.
Unknown VLAN tag	The number of packets discarded due to an unrecognized virtual local area network (VLAN) tag.
Other protocols	The number of packets discarded due to incorrect protocol type (neither IP or ARP).
Not IPv4	The number of packets discarded due to non IPv4
Bad IPv4 header	The number of packets discarded due to invalid IPv4 header
IPv4 MRU exceeded	The number of packets discarded due to packet length is too long.
TCP tiny fragment	The number of packets discarded due to TCP tiny fragment
No ACL match	The number of packets discarded due to not match from ACL lookup
Filtered by ACL	The number of packets discarded due to ACL filter
TTL expired	The number of packets discarded because their time-to-live parameter was exceeded.
Flow lookup twice	The number of packets discarded due to flow lookup to be performed twice (prevent microcode from looping)
Unknown IPv4 class	The number of packets discarded due to unknown classification received from hardware

Field	Description
Too short: IP	The number of packets discarded due to IP packet too short
Too short: ICMP	The number of packets discarded due to ICMP packet too short for lookup key
Too short: IGMP	The number of packets discarded due to IGMP packet too short for lookup key
Too short: TCP	The number of packets discarded due to TCP packet too short for lookup key
Too short: UDP	The number of packets discarded due to UDP packet too short for lookup key
Too short: IPIP	The number of packets discarded due to UDP packet too short for lookup key
Too short: GRE	The number of packets discarded due to GRE header size < 8 bytes
Too short: GRE key	The number of packets discarded due to GRE header says key present but header size < 13 bytes
Don't frag discards	Packets requiring fragmentation that are discarded by the NPU because the IP header don't fragment bit is set.
Fragment packets	Packets fragmented by the NPU due to exceeding MTU of egress port.
Fragment fragments	Total number of fragments fragmented by the NPU and sent to the egress port.
IPv4 VlanMap dropped	Total number of IPv4 VLAN map packets that were dropped.
IPSec NATT keep alive	Total number of NAT-Traversal keep alive packets.
MPLS Flow not found	Total number of packets dropped when an MPLS flow was not found.
MPLS unicast	The number of MPLS Multicast frames and bytes received and transmitted.
Size ASR 5000 only	The number of frames and bytes that were received and transmitted according to the following size ranges: - Less than 17 - 17 through 64 - 65 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 2047 - 2048 through 4095 - 4096 through 4500 - Greater than 4500
Size ASR 5500 only	The number of frames and bytes that were received and transmitted according to the following size ranges: - 0 through 63 - 64 through 127 - 128 through 255 - 256 through 511 - 512 through 1023 - 1024 through 2047 - 2048 through 4095 - 4096 through 8191

show port table

Table 356. show port table Command Output Descriptions

Field	Description
Port	Specifies the chassis slot and port numbers for all installed line cards. For example the two ports for the SPIO installed in slot 24 are displayed as 24/1 and 24/2.
Role	The communication role played by this port. • Mgmt: Port has been designated for remote management access. • Srv: Port handles subscriber traffic.
Type	The card type descriptor.
Admin	Indicates whether or not the card has been configured for use via software. If it has been configured, Enabled will be displayed. If not, Disabled will be displayed.
Oper	The operational state of the card – Up or Down .
Link	The link status – Up or Down .
State	The operational mode of the card that the port belongs to. The card can be in one of the following modes: • Active: Indicates that the card is an active component that will be used to process subscriber data sessions. • Standby: Indicates that the card is a redundant component. Redundant components will become active through manual configuration or automatically should a failure occur. • Offline: Indicates that the card is installed but is not ready to process subscriber data sessions. This could be due to the fact that it is not completely installed (for example, the card interlock switch is not locked, refer to the System Installation Guide for information on installing cards in the system) or that its processes have been halted.
Pair	The redundant port for that port. If a redundant port is not available, None will be displayed. Extra information is shown in the “Redundant” column when the port is in a link aggregation group. It now shows “LAG” and the redundant card/port detail.
Redundant	An aggregated port can be selected and collecting data, and either distributing data or not distributing data. If the port is distributing data, a “+” sign appears in the port detail next to the “LAG” entry. If the port is not distributing data, then a “-” sign appears instead.
Untagged:	Indicates the administrative, operational, link and active/standby states of an untagged (non-VLAN) port.
Tagged: VLAN <vlan_id>	Indicates the administrative, operational, link and active/standby states of a VLAN port.

show port utilization table

Table 357. show port utilization table Command Output Descriptions

Field	Description
Port <slot/port>	Specifies the chassis slot and port number for the port.
Type	Identifies the port type.
Average Port Utilization (in mbps)	
Current	Displays average current port utilization in megabits per second (Mbps).
5min	Displays average port utilization over the last 5-minute interval in Mbps.
15min	Displays average port utilization over the last 15-minute interval in Mbps.
Rx	Displays port utilization for received packets.
Tx	Displays port utilization for transmitted packets.

Chapter 139

show ppp

This chapter describes the output of the **show ppp** command.

show ppp

Table 358. show ppp Command Output Descriptions

Field	Description
PPP Summary	The total number of PPP sessions that are in progress (either active, dormant, being set up, and being disconnected).
Layer Info	The layer status for the various control protocols used in the establishing of the PPP status. Information is displayed for the following: • LCP: Link Control Protocol • IPCP: Internet Protocol Control Protocol • CCP: PPP Compression Control Protocol The information provided represents the total number of sessions that have successfully negotiated the specified control protocol.
Compression	The total number of PPP sessions that meet each of the following specified characteristics: Sessions using Van Jacobsen (VJ) header compression in either direction (local to remote or remote to local). Sessions using Robust Header Compression (ROHC) in either direction (local to remote or remote to local). Sessions using either the Normal or Stateless compression modes. Sessions using no compression or one of the following compression protocols in either direction (local to remote or remote to local): • STAC • MPPC • DEFLATE
Errors	The total number of errors recorded for all of the PPP sessions that are in progress (either active, dormant, being set up, and being disconnected). Many of the error statistics are recorded for the receiving (indicated by In) and transmission (indicated by Out) of data packets.
Data Stats	Displays cumulative statistics for all of the data received (indicated by In) and transmitted (indicated by Out).

show ppp full username

Table 359. show ppp full username Command Output Descriptions

Field	Description
Username	The subscriber's username.
Callid	The subscriber's call identification (callid) number.
Msid	The subscriber's mobile station identification (MSID) number.
LCP State	Indicates whether or not the Link Control Protocol (LCP) was successfully negotiated (Opened). If not, Not Opened will be displayed.
mtu	The subscriber's maximum transmission unit (MTU) size in octets.
mru	The subscriber's maximum reception unit (MRU) size in octets.
auth algorithm	The protocol the subscriber used for authentication. Possible protocols are: • CHAP: Challenge Handshake Authentication Protocol • PAP: Password Authentication Protocol
PFC (loc to rem): (rem to loc):	The PPP PFC transmit and receive settings. (loc to rem): Specifies how Protocol field Compression is applied for PPP packets transmitted to the Peer. Possible values are: • ignore • apply • reject (rem to loc): Specifies whether Protocol Field Compressed PPP packets can be received from the Peer. Possible values are: • allow • deny
ACFC (loc to rem): (rem to loc):	Information is displayed for both directions of the session (remote-to-local and local-to-remote).
async map	The PPP asynchronous control character mapping (a 32-bit map). Information is displayed for both directions of the session (remote-to-local and local-to-remote).
IPCP State	Indicates whether or not the Internet Protocol Control Protocol (IPCP) was successfully negotiated (Opened). If not, Not Opened will be displayed.
IP Header comp	Indicates whether or not Van Jacobson (VJ) header compression or Robust Header Compression (ROHC) is being implemented for the subscriber's session. If neither, none is displayed. Information is displayed for both directions of the session (remote-to-local and local-to-remote).
Local Address	The PPP local address for the subscriber session.
Remote Address	The IP address assigned to the subscriber's mobile device for the duration of the session.
Primary DNS	Indicates the IP address of the primary Domain Name Server (DNS) assigned to the subscriber.

Field	Description
Secondary DNS	Indicates the IP address of the secondary Domain Name Server (DNS) assigned to the subscriber.
Primary NBNS	Indicates the IP address of the primary NetBIOS Name Server (NBNS) assigned to the subscriber.
Secondary NBNS	Indicates the IP address of the secondary NetBIOS Name Server (NBNS) assigned to the subscriber.
IPv6CP State	Indicates whether or not the Internet Protocol v6 Control Protocol (IPv6CP) was successfully negotiated (Opened). If not, Not Opened will be displayed.
In octs(unframed)	The total number of unframed octets received.
In pkts	The total number of packets received
Out octs(unframed)	The total number of unframed octets sent
Out pkts	The total number of packets sent
In ctrl octs	The total number of control octets received
In ctrl pkts	The total number of control packets received
Out ctrl octs	The total number of control octets sent
Out ctrl pkts	The total number of control packets sent
In framed octs	The total number of framed octets received
Out framed octs	The total number of framed octets sent
In data (unfr/data-cmp) octs	The total number of unframed data compressed data octets received
Out data (unfr/data-cmp) octs	The total number of unframed data compressed data octets sent
In data (iphdr-cmp) octs	The total number of data octets with IP header compression received
Out data (iphdr-cmp) octs	The total number of data octets with IP header compression sent
In data (iphdr-cmp-fail) octs	The total number of data octets with failed IP header compression received
In data (iphdr-cmp-fail) pkts	The total number of data packets with failed IP header compression received
In data (iphdr-rohc) octs	The total number of data octets with ROHC IP header compression received
Out data (iphdr-rohc) octs	The total number of data octets with ROHC IP header compression sent
In data (iphdr-rohc-fail) octs	The total number of data octets with failed ROHC IP header compression received
In data(iphdr-rohc-fail) pkts	The total number of data packets with failed ROHC header compression received
In discards	The total number of input discards

Field	Description
In errors	The total number of input errors
Out discards	The total number of output discards
Out errors	The total number of output errors
Bad address	The total number of bad addresses
Bad control	The total number of bad control messages
Pkt too long	The total number of packets that were too long
Bad FCS	The total number of bad Frame Check Sequences (FCS)
Bad pkt length	The total number of bad packet lengths
Echo req rcvd	The total number of echo requests received
Echo rsp rcvd	The total number of echo responses received
Echo req sent	The total number of echo requests sent
Echo rsp sent	The total number of echo responses sent
Invalid magic-number rcvd	The total number of invalid magic numbers received

show ppp statistics pdsn-service

Table 360. show ppp statistics pdsn-service Command Output Descriptions

Field	Description
PPP statistics for pdsn-service	Indicates the name of the PDSN service for which PPP statistics are being displayed.
total sessions initiated	Indicates the total number of subscriber sessions that have been received by the by the system for processing.
session re-negotiated	Indicates the total number of subscriber sessions that have been re-negotiated by the by the system.
successful sessions	Indicates the total number of subscriber sessions that have been successfully connected by the by the system.
failed sessions	Indicates the total number of subscriber sessions that the system has/have failed to process.
total sessions released	Indicates the total number of subscriber sessions that have been disconnected.
failed re-negotiations	Indicates the number of PPP calls that failed while LCP or IPCP was being re-negotiated.
released by local side	Indicates the total number of subscriber sessions that have been dropped by the system.
released by remote side	Indicates the total number of subscriber sessions that have been dropped by the mobile nodes.
Session Failures	
LCP failure max-retry	Indicates the number of sessions that were released during setup due to the system not receiving a response prior to the expiration of the maximum number of Link Control Protocol (LCP) retries.
LCP failure option-issue	Indicates the number of sessions that were released during setup due to failed negotiations between the system and the mobile nodes over Link Control Protocol (LCP) options.
LCP failure unknown	Indicates the number of calls that failed because of miscellaneous LCP failures.
IPCP failure max-retry	Indicates the number of sessions that were released during setup due to the system not receiving a response prior to the expiration of the maximum number of Internet Protocol Control Protocol (IPCP) retries.
IPCP failure option-issue	Indicates the number of sessions that were released during setup due to failed negotiations between the system and the mobile nodes over Internet Protocol Control Protocol (IPCP) options.
IPCP failure unknown	Indicates the number of calls that failed because of miscellaneous IPCP related failures.
IPv6CP failure max-retry	Indicates the number of IPv6CP calls that failed after the maximum number of retries.
IPv6CP failure option issue	Indicates the number of sessions that were released during setup due to failed negotiations between the system and the mobile nodes over IPv6CP options.
IPv6CP failure unknown	Indicates the number of calls that failed because of miscellaneous IPv6CP related failures.

Field	Description
Authentication failures	Indicates the number of sessions that were released during setup due to subscriber authentication failures
Authentication aborted	Indicates the number of times that authentication was not successful because the peer failed to provide the required request or response packet in time.
remote terminated	Indicates the number of sessions that were released by the mobile node.
lower layer disconnected	Indicates the number of times that the peer terminated the lower protocol layer.
miscellaneous failures	Indicates the number of session failures that occurred due to reasons other than those listed here.
Session Progress	
sessions (re)entered LCP	Indicates the number of sessions entering or re-entering the Link Control Protocol (LCP) phase of call setup.
sessions (re)entered Auth	Indicates the number of sessions entering or re-entering the authentication phase of call setup.
sessions (re)entered IPCP	Indicates the number of sessions entering or re-entering the Internet Protocol Control Protocol (IPCP) phase of call setup.
sessions (re)entered IPv6CP	Indicates the number of sessions entering or re-entering the IPv6CP phase of call setup.
successful LCP	Indicates the number of calls that completed LCP successfully.
successful Authentication	Indicates the number of calls that completed authentication successfully.
Session Re-negotiations	
initiated by local	Indicates the number of session re-negotiations initiated by the system.
initiated by remote	Indicates the number of session re-negotiations initiated by the mobile nodes.
address mismatch	Indicates the number of session re-negotiations that occurred due to mis-matched IP addresses.
lower layer handoff	Indicates the number of times that the PDSN service renegotiated PPP because of a suspicious RP handoff.
parameter update	Indicates the number of times that the PDSN service renegotiated PPP to update some PPP parameters (e.g. DNS address obtained from HA for regular MIP)
other reasons	Indicates the number of session re-negotiations that occurred due to reasons other than those listed here.
connected session re-neg	Indicates the number of PPP renegotiation happened for sessions which are already in connected/established state.
Session Authentication	
CHAP auth attempt	Indicates the number of sessions that attempted to authenticate using the Challenge Handshake Authentication Protocol (CHAP).
CHAP auth success	Indicates the number of sessions that successfully authenticated using the Challenge Handshake Authentication Protocol (CHAP).

Field	Description
CHAP auth failure	Indicates the number of sessions that failed authentication using the Challenge Handshake Authentication Protocol (CHAP).
CHAP auth aborted	Indicates the number of times that CHAP authorization was aborted due to the fact that the peer failed to provide the required CHAP response packet in time.
PAP auth attempt	Indicates the number of sessions that attempted to authenticate using the Password Authentication Protocol (PAP).
PAP auth success	Indicates the number of sessions that successfully authenticated using the Password Authentication Protocol (PAP).
PAP auth failure	Indicates the number of sessions that failed authentication using the Password Authentication Protocol (CHAP).
PAP auth aborted	Indicates the number of times that PAP authorization was aborted due to the fact that the peer failed to provide the required PAP response packet in time.
MSCHAP auth attempt	Indicates the number of sessions that attempted to authenticate using MicroSoft CHAP (MS CHAP).
MSCHAP auth success	Indicates the number of sessions that successfully authenticated using MicroSoft CHAP (MS CHAP).
MSCHAP auth failure	Indicates the number of sessions that failed authentication using MicroSoft CHAP (MS CHAP).
MSCHAP auth aborted	Indicates the number of times that MSCHAP authorization was aborted due to the fact that the peer failed to provide the required CHAP response packet in time.
sessions skipped PPP Auth	Indicates the number of sessions that skipped PPP authorization.
Session Disconnect reason	
remote initiated	Indicates the number of sessions for which the mobile node initiated the disconnection.
remote disc. lower layer	Indicates the number of sessions in which the mobile node disconnected the lower layers of the protocol stack.
admin disconnect	Indicates the number of sessions for which the system initiated the disconnection.
local disc. lower layer	Indicates the number of sessions in which the system disconnected the lower layers of the protocol stack.
idle timeout	Indicates the number of sessions disconnected due to exceeding their idle timeout limit.
absolute timeout	Indicates the number of sessions disconnected due to exceeding their absolute timeout limit.
keep alive failure	Indicates the number of sessions disconnected due to keep alive failures.
no resource	Indicates the number of sessions disconnected due to lack of resources on the local side (CPU and memory).
flow add failure	Indicates the number of sessions for which the Network Processor Unit (NPU) failed to add a flow.
exceeded max LCP retries	Indicates the number of sessions disconnected due to exceeding their maximum number of Link Control Protocol (LCP) retries.

Field	Description
exceeded max IPCP retries	Indicates the number of sessions disconnected due to exceeding their maximum number of Internet Protocol Control Protocol (IPCP) retries.
exceeded max setup timer	Indicates the number of sessions disconnected due to exceeding their maximum amount of time allotted for session setup.
invalid dest-context	Indicates the number of sessions disconnected due to the specification of an invalid destination context. NOTE: Refer to the System Administration and Administration Reference for additional information about destination contexts and how they are determined.
LCP option-neg failed	Indicates the number of sessions that were disconnected due to failed negotiations between the system and the mobile nodes over Link Control Protocol (LCP) options.
IPCP option-neg failed	Indicates the number of sessions that were disconnected due to failed negotiations between the system and the mobile nodes over Internet Protocol Control Protocol (IPCP) options.
no remote-ip address	Indicates the number of sessions that were disconnected due to the lack of an IP address for the mobile node.
call type detect failed	Indicates the number of sessions that were disconnected due to the system not being able to determine what type of service to provide for the session. The possible services are: • pdsn-simple-ip • pdsn-mobile-ip • ha-mobile-ip
source address violation	Indicates the number of sessions that were disconnected due to source address violations.
exceeded max IPv6CP retries	Indicates the number of sessions disconnected due to exceeding their maximum amount of time allotted for IPv6CP setup.
IPv6CP option-neg failed	Indicates the number of sessions that were disconnected due to failed negotiations between the system and the mobile nodes over IPv6CP options.
remote disc. upper layer	Indicates the number of times a session was disconnected because the remote peer disconnected the upper protocol layer.
long duration timeout	The number of sessions disconnected due to expiration of the long duration timer.
PPP auth failures	The number of sessions that failed due to PPP authorization failures.
miscellaneous reasons	Indicates the number of sessions that were disconnected for reasons other than those listed here.
Session Data Compression	
sessions negotiated comp	Indicates the total number of sessions that negotiated the use data compression.
STAC Compression	Indicates the total number of sessions that negotiated the use data compression using the STAC protocol.
MPPC compression	Indicates the total number of sessions that negotiated the use data compression using the MPPC protocol.
Deflate Compression	Indicates the total number of sessions that negotiated the use data compression using the DEFLATE protocol.
CCP negotiation failures	Indicates the number of Compression Control Protocol negotiation failures.

Field	Description
Session Header Compression	
VJ compression	Indicates the total number of sessions that negotiated the use of Van Jacobsen (VJ) header compression.
ROHC Compression	Indicates the total number of sessions that negotiated the use of Robust Header Compression (ROHC).
LCP Echo Statistics	
total LCP Echo Req. sent	The total number of LCP Echo requests sent to the peer.
LCP Echo Req. resent	The total number of LCP echo requests retransmitted to the peer.
LCP Echo Reply received	The total number of LCP echo replies received from the peer.
LCP Echo Request timeout	The total number of LCP Echo timeouts that occurred since a Reply was not received.
Receive Errors	
bad FCS errors	Indicates the number of packets received with an invalid Frame Check Sequence (FCS).
unknown protocol errors	Indicates the number of packets received with an invalid protocol type.
bad Address errors	Indicates the number of packets received with a bad address field.
bad control field errors	Indicates the number of packets received with a bad control field.
bad pkt length	Indicates the number of packets received with an invalid packet length.

Chapter 140

show ps-network

This chapter includes the **show ps-network** command output tables.

show ps-network all status

Table 361. show ps-network all status Command Output Descriptions

Field	Description
PS Network name	Indicates the name of the Packet Switched (PS) network instance for which status is displayed.
Associated SCCP-Network	Indicates the name of the Signalling Connection Control Part (SCCP) network service instance which is associated with referenced PS network instance.
Associated GTPU Service	Indicates the name of the GTP-U service instance which is associated with referenced PS network instance.
GTPU Context Name	Indicates the name of the context in which GTP-U service instance is configured.
SGSN Point Code	Indicates the address of SGSN in SS7 point code notation which is serving the referenced PS network instance.
Status	Indicates the status of SGSN which is serving the referenced PS network instance.
Network Status	Indicates the status of network in which the referenced PS network instance is placed.
NRI	Indicates the Network Resource Identification (NRI) bit configuration status for the referenced PS network.
IDNNS	Indicates the Intra-Domain NAS Node Selector (IDNNS) configuration status for the referenced PS network to transport the NRI value.
CORE NODE MAP	Indicates the core node mapping configuration status for the referenced PS network.
Ranap Reset Ack Timer	The timer value, in seconds, that defines how long the HNB-GW waits for a RESET ACK message from the SGSN after transmitting a RESET message. This setting is used only if the HNB-GW Initiated RANAP Reset function is enabled.
Ranap Reset Maximum Retransmissions	Sets the maximum number of retries allowed for the HNB-GW to transmit a RANAP RESET message to the SGSN if the RESET ACK timer expires. This setting is used only if the HNB-GW Initiated RANAP Reset function is enabled.
Ranap Reset Guard Timer	The timer that the HNB-GW starts after receiving a RESET message from the PS core network. While this timer is running, the HNB-GW discards any new RESET messages that it receives.
Global RNC-Id	This group displays the information related to global Radio Network Controller settings for use by the PS core network for HNB-GW service(s) on a chassis. It is configured under the PLMN-ID.
MCC	The Mobile Country Code defined for use with this HNB-GW service. It consists of the first 3 digits of the Available Radio Network PLMN ID.
MNC	The Mobile Network Code defined for use with this HNB-GW service. It consists of the last 3 digits of the Available Radio Network PLMN ID.
Id	The Radio Network Controller ID provided to HNBs for use by the PS core network for this HNB-GW service. It is configured under the PLMN-ID.

Chapter 141

show prepaid

This chapter describes the output of the `show prepaid` command.

show prepaid 3gpp2 statistics

Table 362. show prepaid 3gpp2 statistics Command Output Descriptions

Field	Description
total pre-paid sessions	The total number of Pre-paid sessions counted since the last system restart or since the last clear prepaid 3gpp2 statistics command was issued.
current pre-paid sessions	The total number of currently active Pre-paid sessions.
total online-auth success	The total number of successful online pre-paid authorizations (credit updates).
total online-auth failure	The total number of failed online pre-paid authorizations (credit updates).
online prepaid errors	The total number of online prepaid messaging errors.
regular auth prepaid err	The total number of standard RADIUS authentication errors
total ptt sessions	The total number of PTT sessions counted since the last system restart or since the last clear prepaid 3gpp2 statistics command was issued.
current ptt sessions	The total number of currently active PTT sessions.
total ptt filtering sess	The total number of PTT filtering sessions counted since the last system restart or since the last clear prepaid 3gpp2 statistics command was issued. NOTE: A PTT filtering session discards all user traffic that is not sent directly to, or from, the PTT switch.
current ptt filtering sess	The total number of currently active PTT filtering sessions. NOTE: A PTT filtering session discards all user traffic that is not sent directly to, or from, the PTT switch.
total non ptt sessions	The total number of non-PTT sessions counted since the last system restart or since the last clear prepaid 3gpp2 statistics command was issued.
current non ptt sessions	The total number of currently active sessions that are not PTT sessions.
total non determined sess	The total number of sessions counted since the last system restart or since the last clear prepaid 3gpp2 statistics command was issued that can not be determined whether or not they are PTT sessions.
curr non determined sess	The total number of currently active sessions that can not be determined whether or not they are PTT sessions.

show prepaid wimax statistics asngw-service

Table 363. show prepaid wimax statistics asngw-service Command Output Descriptions

Field	Description
total prepaid sessions	The total cumulative prepaid sessions processed by this service.
current prepaid sessions	The total number of prepaid sessions currently active in this service.
total online-auth success	The total number of authentication success for online prepaid authentication requests.
total online-auth failures	The total number of authentication failures/rejects received for online authentication requests.
online prepaid errors	The total number of errors encountered due to the prepaid response message (success) being discarded due to problems like missing appropriate attributes or wrong attribute values though we had received it as access accept from radius server.
initial auth prepaid err	The total number of errors, while processing radius responses, specific to radius protocol violations such as authenticator attribute failed validation.

Chapter 142

show radius

This chapter describes the output of the **show radius** command.

show radius client status

Table 364. show radius client status verbose Command Output Descriptions

Field	Description
RADIUS Client Status	The RADIUS client’s status as “UP” or “DOWN”.
Active nas-ip-address	The NAS IP address configured for the client that is currently active. NOTE: If the RADIUS Client Status is “DOWN”, then this field displays “NONE”.
Configured Primary nas-ip-address	The NAS IP address configured as the primary and the interface’s current status as “UP” or “Down”.
Configured Backup nas-ip-address	The NAS IP address configured as the backup and the interface’s current status as “UP” or “Down”.

show radius counters all

Table 365. show radius counters all Command Output Descriptions

Field	Description
Per-Context RADIUS Authentication Counters	
Access-Request Response	
Invalid Source Address Received	The number of Access-Request responses received from invalid source addresses.
Responses Dropped due to Closed Sockets	The number of responses dropped due to closed sockets.
Response Dropped No Matching Request found	The number of responses dropped due to no matching requests.
Per-Context Change-of-Authorization Counters	
Invalid Source Address Received (RPF check failed)	The number of responses received from invalid source addresses.
Server-specific Change-of-Authorization Counters	
Change-of-Authorization server address	The IP address and port number of the Change-of-Authorization server.
Change-of-Authorization Request received	The number of CoA requests received.
Change-of-Authorization Ack sent	The number of CoA acknowledgements sent.
Change-of-Authorization Nak sent	The number of CoA negative acknowledgements sent.
Change-of-Authorization Nak Unsupported Attribute sent	The number of CoA negative acknowledgements sent with unsupported attribute.
Change-of-Authorization Nak Missing Attribute sent	The number of CoA negative acknowledgements sent with missing attribute.
Change-of-Authorization Nak NAS Id Mismatch sent	The number of CoA negative acknowledgements with NAS ID mismatch sent.
Change-of-Authorization Nak Invalid Request sent	The number of CoA negative acknowledgements with invalid request sent.
Change-of-Authorization Nak Unsupported Service sent	The number of CoA negative acknowledgements with unsupported service sent.
Change-of-Authorization Nak Sess Context Not Found sent	The number of CoA negative acknowledgements with session context not found sent.
Change-of-Authorization Nak Resource Unavailable sent	The number of CoA negative acknowledgements with resource unavailable sent.

■ show radius counters all

Field	Description
Change-of-Authorization Malformed Packet Rcvd	The number of CoA message disconnected due to malformed message.
Change-of-Authorization Msg-Authenticator Mismatch	The number of CoA message disconnected due to message authenticator failure.
Change-of-Authorization Duplicate Request	The number of CoA requests dropped due to duplicate message.
Change-of-Authorization Event-Timestamp Check Failed	The number of CoA requests dropped due to Event-Timestamp attribute issues.
Change-of-Authorization Request Initiated sent	The number of CoA request Initiated sent.
Disconnect-Message Request received	The number of Disconnect-Message Requests received.
Disconnect-Message Ack sent	The number of Disconnect-Message Acknowledgements sent.
Disconnect-Message Ack Residual Session Removed sent	The number of Disconnect-Message Acknowledgements Residual Session Removed sent.
Disconnect-Message Nak sent	The number of Disconnect-Message Negative Acknowledgment sent.
Disconnect-Message Nak Unsupported Attributes sent	The number of Disconnect-Message Negative Acknowledgment with unsupported attributes sent.
Disconnect-Message Nak Missing Attributes sent	The number of Disconnect-Message Negative Acknowledgment with missing attributes sent.
Disconnect-Message Nak NAS Id Mismatch sent	The number of Disconnect-Message Negative Acknowledgment with NAS ID mismatch sent.
Disconnect-Message Nak Invalid Request sent	The number of Disconnect-Message Negative Acknowledgment with invalid requests sent.
Disconnect-Message Nak Unsupported Service sent	The number of Disconnect-Message Negative Acknowledgment with unsupported service sent.
Disconnect-Message Nak Session Context Not Found sent	The number of Disconnect-Message Negative Acknowledgment with session context not found sent.
Disconnect-Message Nak Context Not Removable sent	The number of Disconnect-Message Negative Acknowledgment with context not removable sent.
Disconnect-Message Nak Context Not Removable Dormant	The number of Disconnect-Message Negative Acknowledgment with context not removable dormant.
Disconnect-Message Nak Resource Unavailable sent	The number of Disconnect-Message Negative Acknowledgment with resource unavailable sent.
Disconnect-Message Malformed Packet Rcvd	The number of Disconnect-Message with malformed packet received.
Disconnect-Message Msg-Authenticator Mismatch	The number of Disconnect-Message with message authenticator mismatch.
Disconnect-Message Duplicate Request	The number of Disconnect-Message duplicate requests.

Field	Description
Disconnect-Message Event-Timestamp Check Failed	The number of Disconnect-Message with event timestamp check failed.
Disconnect-Message Request Initiated sent	The number of Disconnect-Message with request initiated sent.
Change-of-Authorization/Disconnect-Message timeout	The number of messenger timeouts while processing the CoA/Dm messages. This will be displayed only in the hidden mode.
Change-of-Authorization/Disc-Message messenger bounce	The number of messenger bounces while processing the CoA/Dm messages. This will be displayed only in the hidden mode.
Server-specific Authentication Counters	
Authentication server address	The IP address, port number, and server group of the RADIUS authentication server.
Access-Request Sent	The total number of Access Request messages sent by the system to the server.
Access-Request with DMU Attributes Sent	The total number of Access Request messages that have been sent to the server with DMU attributes present.
Access-Request Pending	The total number of Access Request messages that have been sent to the server that are pending a response.
Access-Request Retried	The total number of Access Request messages that have been re-transmitted due to the expiration of the RADIUS timeout parameter.
Access-Request with DMU Attributes Retried	The total number of Access Request messages with DMU attributes present that have been re-transmitted due to the expiration of the RADIUS timeout parameter.
Access-Challenge Received	The total number of Access Challenges received from the server as part of the authentication process.
Access-Accept Received	The total number of Access Accept messages received by the system from the server.
Access-Reject Received	The total number of Access Reject messages received by the system from the server.
Access-Reject Received with DMU Attributes	The total number of Access Reject messages with DMU attributes present received by the system from the server.
Access-Request Timeouts	The total number of times that the configured RADIUS timeout parameter was exceeded causing the system to have to re-send an Access Request message.
Access-Request Current Consecutive Failures in a mgr	The current maximum number of consecutive failures that occurred for a single AAA manager while initiating Access-Request messages.
Access-Request Response Bad Authenticator Received	The total number of Accept Request responses received by the system from the server that contains a incorrect Authenticator field, thereby failing message authentication. The system drops these messages.
Access-Request Response Malformed Received	The total number of Accept Request responses received by the system from the server that were malformed. The system drops these messages.
Access-Request Response Malformed Attribute Received	The total number of malformed or invalid attributes received in Access-Request response messages.
Access-Request Response Unknown Type Received	The total number of Accept Request responses received by the system from the server that contained an unknown message type. The system drops these messages.
Access-Request Response Dropped	The total number of Accept Request responses from the server that were dropped.

■ show radius counters all

Field	Description
Access-Request Response Last Round Trip Time	The time it took for the system to receive a valid response from the server for the last authentication request.
Access-Request Response Average Round Trip Time	The average time it took for the system to receive a valid response from the server for Access Request Response.
Prepaid Related Statistic Counters	
Online Access-Request Sent	The total number of Online Access Request messages sent.
Online Access-Request Pending	The total number of Online Access Request messages pending.
Online Access-Request Retried	The total number of Online Access Request messages retried.
Online Access-Accept Received	The total number of Online Access Accept messages received.
Online Access-Reject Received	The total number of Online Access Reject messages received.
Online Access-Request Timeouts	The total number of Online Access Request message timeouts.
Online Access-Request Response Bad Authenticator Received	The total number of Online Access Request messages that failed with a bad authenticator.
Online Access-Request Response Malformed Received	The total number of Online Access Request Response messages that were malformed.
Online Access-Request Response Malformed Attr Received	The total number of Online Access Request Response messages that contained a malformed attribute.
Online Access-Request Response Unknown Type Received	The total number of Online Access Request Response messages that are of an unknown type.
Online Access-Request Response Bad Message Authenticator	The total number of Online Access Request Response messages that contained a bad message authenticator.
Online Access-Request Response NO Message Authenticator	The total number of Online Access Request Response messages that contained no message authenticator.
Server-specific Probing Counters	
State	The state of the RADIUS server. Enabled or Disabled.
Number of transactions issued	The total number of transactions issued to the RADIUS server.
Number of successful transactions	The total number of complete successful transactions to the RADIUS server.
Number of failed transactions	The total number of failed transactions to the RADIUS server.
Last successful transaction time	The time of day that the last successful transaction was completed with the RADIUS server.
Last failed transaction time	The time of day that the last failed transaction with the RADIUS Server occurred.
Last roundtrip time	The amount of time, in milliseconds, that it took from when a request was sent to and acknowledgement was received from the RADIUS server.
Server-specific Keepalive Auth Counters	
Keepalive Access-Request Sent	The number of keepalive access requests that were sent.
Keepalive Access-Request Retried	The number of keepalive access-requests that were retried.

Field	Description
Keepalive Access-Request Timeouts	The number of keepalive access-requests that timed out.
Keepalive Access-Accept Received	The number of keepalive access-accept messages that were received.
Keepalive Access-Reject Received	The number of keepalive access-reject messages that were received.
Keepalive Access-Response Bad Authenticator Received	The number of bad authenticator keepalive access-response that were received.
Keepalive Access-Response Malformed Received	The number of malformed keepalive-access responses that were received.
Keepalive Access-Response Malformed Attribute Received	The number of malformed attributes for keepalive-access responses that were received.
Keepalive Access-Response Unknown Type Received	The number of unknown keepalive-access responses that were received.
Keepalive Access-Response Dropped	The number of keepalive-access responses that were dropped.
Per-Context RADIUS Accounting Counters	
Accounting Response	
Invalid Source Address Received	The number of Accounting responses received from invalid source addresses.
Responses Dropped due to Closed Sockets	The number of responses dropped due to closed sockets.
Response Dropped No Matching Request found	The number of responses dropped due to no matching requests.
Server-specific Accounting Counters	
Accounting server address	The IP address, port number, and server group of the RADIUS accounting server, and the UDP port over which the system exchanges accounting data with the server.
Accounting-Request Sent	The total number of Accounting Request messages sent by the system to the server.
Accounting-Start Sent	The total number of Accounting sessions that have been established.
Accounting-Stop Sent	The total number of Accounting sessions that have been stopped.
Accounting-Interim Sent	The total number of Accounting Interim messages that have been sent to the server. This mainly contains the accumulated packets/bytes counts.
Accounting-On Sent	The total number of Accounting-on sessions that have been sent.
Accounting-Off Sent	The total number of Accounting-off sessions that have been stopped.
Accounting-Request Pending	The total number of Accounting Request messages that have been sent to the server that are pending a response.
Accounting-Request Retried	The total number of Accounting-requests that have been retried.
Accounting-Start Retried	The total number of Accounting-start messages that have been retried.
Accounting-Stop Retried	The total number of Accounting-stop messages that have been retried.
Accounting-Interim Retried	The total number of Accounting-interim messages that have been retried.

■ show radius counters all

Field	Description
Accounting-On Retried	The total number of Accounting-on messages that have been retried.
Accounting-Off Retried	The total number of Accounting-off messages that have been retried.
Accounting-Response Received	The total number of Accounting-response messages that have been received.
Accounting-Request Timeouts	The total number of Accounting-request messages that have timed out.
Accounting-Request Current Consecutive Failures in a mgr	The current maximum number of consecutive failures that occurred for a single AAA manager while initiating Accounting-Request messages.
Accounting-Response Bad Response Received	The total number of Accounting-Response messages that failed with a bad authenticator.
Accounting-Response Malformed Received	The total number of Accounting-Response responses received by the system from the server that were malformed.
Accounting-Response Unknown Type Received	The total number of Accounting-Response responses received by the system from the server that contained an unknown message type.
Accounting-Response Dropped	The total number of keepalive Accounting Response messages that were dropped.
Accounting-Response Last Round Trip Time	The time it took for the system to receive a valid response from the server for the last Accounting Response.
Accounting-Response Average Round Trip Time	The average time it took for the system to receive a valid response from the server for Accounting Responses.
Accounting Total G1 (Acct-Output-Octets)	The total number of accounted bytes outputted to user.
Accounting Total G2 (Acct-Input-Octets)	The total number of accounted bytes as user input.
Server-specific Keepalive Acct Counters	
Keepalive Accounting-Request Sent	The total number of keepalive accounting request messages sent.
Keepalive Accounting-Request Retried	The total number of keepalive accounting messages retried.
Keepalive Accounting-Request Successful	The total number of successful keepalive accounting messages.
Keepalive Accounting-Request Timeouts	The total number of keepalive accounting timeout messages.
Keepalive Accounting-Response Bad Response Received	The total number of keepalive accounting request response messages that failed with a bad authenticator.
Keepalive Accounting-Response Malformed Received	The total number of keepalive accounting request response messages that were malformed.
Keepalive Accounting-Response Unknown Type Received	The total number of keepalive accounting request response messages that failed with an unknown type.
Keepalive Accounting-Response Dropped	The total number of keepalive accounting request response messages that were dropped.
Per-Context RADIUS Mediation Accounting Counters	
Accounting Response	

Field	Description
Invalid Source Address Received	The number of Mediation Accounting responses received from invalid source addresses.
Responses Dropped due to Closed Sockets	The number of responses dropped due to closed sockets.
Response Dropped No Matching Request found	The number of responses dropped due to no matching requests being found.
Server-specific Mediation Accounting Counters	
Mediation Accounting server address	The IP address of the RADIUS Mediation accounting server, and the UDP port over which the system exchanges accounting data with the mediation server.
Accounting-Request Sent	Indicates the total number of Accounting-Request messages sent by the system to the Mediation server.
Accounting-Start Sent	Indicates the total number of Accounting sessions that have been established with Mediation server.
Accounting-Stop Sent	The total number of Accounting sessions that have been stopped by Mediation server.
Accounting-Interim Sent	The total number of Accounting-Interim messages that have been sent to the Mediation server. This mainly contains the accumulated packets/bytes counts.
Accounting-On Sent	The total number of Accounting-On sessions that have been sent.
Accounting-Off Sent	The total number of Accounting-Off sessions that have been stopped.
Accounting-Request Pending	The total number of Accounting-Request messages that have been sent to the mediation server that are pending a response.
Accounting-Request Retried	The total number of Accounting-Requests that have been retried.
Accounting-Start Retried	The total number of Accounting-Start messages that have been retried.
Accounting-Stop Retried	The total number of Accounting-Stop messages that have been retried.
Accounting-Interim Retried	The total number of Accounting-Interim messages that have been retried.
Accounting-On Retried	The total number of Accounting-On messages that have been retried.
Accounting-Off Retried	The total number of Accounting-Off messages that have been retried.
Accounting-Response Received	The total number of Accounting-Response that were received.
Accounting-Request Timeouts	The total number of Accounting-Request timeouts.
Accounting-Request Current Consecutive Failures in a mgr	The current maximum number of consecutive failures that occurred for a single AAA manager while initiating Accounting-Request messages.
Accounting-Response Bad Response Received	The total number of Accounting-Response messages that failed with a bad authenticator.
Accounting-Response Malformed Received	The total number of Accounting-Response responses received by the system from the server that were malformed.
Accounting-Response Unknown Type Received	The total number of Accounting-Response messages received by the system from the Mediation server that contained an unknown message type. The system drops these messages.
Accounting-Response Dropped	The total number of Accounting-Response messages from the server that were dropped.

Field	Description
Access-Response Last Round Trip Time	The amount of time it took for the system to receive a valid response from the mediation server for the last Access-Response messages.
Accounting-Response Average Round Trip Time	The average time it took for the system to receive a valid response from the server for Accounting-Response messages.

show radius servers

Table 366.show radius { servers detail Command Output Descriptions

Field	Description
vvvvv	Displays information about the type and state of the RADIUS server. From left-to-right, the first character represents the RADIUS server Type as one of the following: • (A) - Authentication • (a) - Accounting • (C) - Charging • (c) - Charging Accounting • (M) - Mediation • (m) - Mediation Accounting From left-to-right, the second character represents the RADIUS server Preference as one of the following: • (P) - Primary • (S) - Secondary From left-to-right, the third character represents the RADIUS server State as one of the following: • (A) - Active • (N) - Not Responding • (D) - Down • (W) - Waiting Accounting-On • (I) - Initializing • (w) - Waiting Accounting-Off • (a) Active Pending • (U) - Unknown From left-to-right, the fourth character indicates the RADIUS server Administrative Status (which is saved in the configuration file for re-establishment at reboot) as one of the following: (E) - Enabled (D) - Disabled From left-to-right, the fifth character indicates whether the RADIUS server's saved Administrative Status may be overridden at the next reboot: (O) - Overridden: (Note: to preserve the desired Administrative State, use the appropriate configuration mode radius [accounting charging charging accounting] server command to reset the admin-status.) (.) - Not Overridden
IP	Displays the IP address of the RADIUS server.
Port	Displays the UDP port used to communicate with the RADIUS server.
Group	Display the RADIUS server group to which the server belongs.
Event History	Displays a historical record of state information for the server including a time/date stamp.

Field	Description
Total servers matching specified criteria	Displays the total number of RADIUS servers returned by the execution of the command.

Chapter 143

show resources

This chapter describes the output of the `show resources` command.

show resources cpu

Table 367. show resources cpu Command Output Descriptions

Field	Description
Active CPUs	Displays information for CPUs on packet processing cards and management cards that are in the active mode.
Total CPUs	The total number of CPUs on active cards.
Highest Load	The highest loading of a processor among all of the active processors. The processor that experienced the loading is identified in the format: (CPU <slot_number>/<processor_number>)
Total Memory	The total amount of memory available for all active processors in gigabytes.
Total Used	The total amount of memory (in gigabytes) used for all active processors.
Least Free	The lowest amount of memory (in megabytes) available to an active processor. The processor with the lowest amount of available memory is identified in the format: (CPU <slot_number>/<processor_number>)
Total Temporary Files	The total amount of space for temporary files being maintained in memory.
Most Temporary Files	The maximum amount of memory used for temporary files on a specific active processor. The processor on which the memory is being used is identified in the format: (CPU <slot_number>/<processor_number>)
Standby CPUs	Displays information for CPUs on packet processing cards and management cards that are in the standby mode.
Total CPUs	The total number of CPUs on standby cards.
Highest Load	The highest loading of a processor among all of the standby processors. The processor that experienced the loading is identified in the following format: (CPU <slot_number>/<processor_number>)
Total Memory	The total amount of memory (in gigabytes) available for all standby processors.
Total Used	The total amount of memory (in gigabytes) used for all standby processors.
Least Free	The lowest amount of memory (in megabytes) available to an standby processor. The processor with the lowest amount of available memory is identified in the format: (CPU <slot_number>/<processor_number>)
Total Temporary Files	The total amount of space for temporary files being maintained in memory.
Most Temporary Files	The maximum amount of memory used for temporary files on a specific standby processor. The processor on which the memory is being used is identified in the format: (CPU <slot_number>/<processor_number>)

show resources session

Table 368. show resources session Command Output Descriptions

Field	Description
In-Use Session Managers	
Number of Managers	The total number of Session Managers currently in use on processing calls.
Capacity	The allowed call capacity for all of the Session Managers currently in use.
Usage	The total number of sessions currently active.
Busy-Out Session Managers	
Number of Managers	The number of Session Manager tasks in a busied-out state and not available to service new sessions.
Capacity	Indicates the total session capacity of the system.
Usage	The number of Session Manager tasks in use.
Standby Session Managers:	
Number of Managers	The total number of Session Managers currently in standby mode waiting to process calls.
<XXXX> Service:	
In Use	The total number of configured service sessions that are currently in use processing subscriber sessions.
Max Used	The maximum number of service sessions used in processing subscriber sessions. This field displays a timestamp on each peak value and identifies the last time (if any) the peaks were cleared.
Limit	The total number of sessions that can be processed by all configured services of this type. This value is based on session capacity licenses and the configuration of the max-subscribers parameter for the services. Note: Not applicable for ASN PC Service.
License Status	Indicates whether or not the number of sessions being processed by all configured services of this type within the system falls within the range granted by the session capacity license installed. If it is within the range, "Within Acceptable Limits" is displayed. If not, "Exceeded Acceptable Limits" is displayed. NOTE: Not applicable for ASN PC Service.
ECS Information:	NOTE: This information is displayed only if Active Charging Service is configured in the non-unified mode.
In-Use ACS Managers:	
Number of Managers	The total number of ACS Managers currently active processing calls.
Capacity	Indicates call capacity of the system as < min (minimum available ECS sessions), < typical, and < max (maximum possible ECS sessions).
Usage	The total number of ACS Manager tasks in use.

Field	Description
Standby ACS Managers:	
Number of Managers	The total number of ACS Managers currently in standby mode.
Enhanced Charging Service:	
In Use	The total number of service sessions that are currently in use.
Max Used	The maximum number of service sessions used.
Limit	The total number of sessions that can be processed by all configured services of this type. This value is based on session capacity license.
License Status	Indicates whether or not the number of sessions being processed by all configured services of this type within the system falls within the range granted by the session capacity license installed. If it is within the range, “Within Acceptable Limits” is displayed. If not, “Exceeded Acceptable Limits” is displayed.
ECS Information:	NOTE: This information is displayed only if Active Charging Service is configured in the unified mode.
Capacity	Indicates capacity of the system as < est (estimated available ECS sessions) and < max (maximum possible ECS sessions).
Enhanced Charging Service:	
In Use	The total number of ECS service sessions that are currently in use.
Max Used	The maximum number of ECS service sessions used.
Limit	The total number of sessions that can be processed by all configured services of this type. This value is based on session capacity license.
License Status	Indicates whether or not the number of sessions being processed by all configured services of this type within the system falls within the range granted by the session capacity license installed. If it is within the range, “Within Acceptable Limits” is displayed. If not, “Exceeded Acceptable Limits” is displayed.

Chapter 144

show rohc statistics

Table 369. show rohc statistics Command Output

Field	Description
Compressor Statistics:	
Active contexts:	Number of active ROHC contexts currently available in the system
Total setup:	Total number of Contexts created till now since the time the stats were being collected.
Total deleted:	Total number of Contexts destroyed till now since the time the stats were being collected.
Messages(TX):	Messages that were send from the Compressor
IR:	Number of ROHC IR packets
IR-DYN:	Number of ROHC IR Dynamic packets
Type0:	Number of ROHC Type -0 packets
Type1:	Number of ROHC Type-1 packets
Type2:	Number of ROHC Type-2 packets
Normal:	Number of ROHC Uncompressed packets
Feedback(RX):	All Feedback messages received by compressors
ACK:	Number of ROHC Feedback Ack received
NACK:	Number of ROHC Feedback NACK received
Static-NACK:	Number of ROHC Feedback STATIC NACK received
Error:	Number of Feedback packets that had errors.
Misc:	
Mode change:	Number of ROHC Mode changes
Profile change:	Number of ROHC Profile changes
State change:	Number of ROHC state changes
Pkts(TX):	Packets Transmitted
Pkts Sent:	Number of Packets sent
Bytes Sent:	Number of bytes sent
Pkts Processed:	Number of input packets discarded

Field	Description
Pkts Discarded:	Number of input packets processed.
Segmentation:	Number of input packets that were segmented.
Segment Pkts:	Number of ROHC segment packets
Only Feedback:	Number of ROHC feedbacks that were NOT piggybacked to other ROHC packets
Piggyback FB:	Number of ROHC feedbacks that were piggybacked to other ROHC packets
Only FB packets:	Number of ROHC packets that carry ONLY multiple ROHC feedbacks.
Efficiency(TX):	Transmission Efficiency
Uncomp Hdr:	Number of uncompressed headers
Compressed Hdr:	Number of compressed headers
Percentage comp:	Percentage comparison
Histogram(TX):	Transmission Histogram
Size: <2:	Number less than 2
Size: <4:	Number less than 4
Size: <8:	Number less than 8
Size: <16:	Number less than 16
Size: >16:	Number greater than 16
Decompressor Statistics:	
Active contexts:	Number of active ROHC contexts currently available in the system
Total setup:	Total number of Contexts created till now since the time the stats were being collected.
Total deleted:	Total number of Contexts destroyed till now since the time the stats were being collected.
Messages(RX):	Received ROHC messages
IR:	Number of ROHC IR packets
IR-DYN:	Number of ROHC IR Dynamic packets
Type0:	Number of ROHC Type -0 packets
Type1:	Number of ROHC Type-1 packets
Type2:	Number of ROHC Type-2 packets
Normal:	Number of ROHC Uncompressed packets
Feedback(TX):	
ACK:	Number of ROHC Feedback Ack received
NACK:	Number of ROHC Feedback NACK received
Static-NACK:	Number of ROHC Feedback STATIC NACK received
Error:	Number of Feedback packets that had errors.

Field	Description
Errors(RX):	Errors in received ROHC pkts
Checksum:	Number of packets discarded due to checksum errors
State mismatch:	Number of packets discarded due to state mismatch
Parse error:	Number of packets discarded due to parsing errors
Memory:	Number of packets discarded due to memory constraints
Other error:	Number of packets discarded due to unclassified errors
Reassembly errors:	Number of packets discarded due to reassembly errors
Misc:	
Mode change:	Number of ROHC Mode changes
Profile change:	Number of ROHC Profile changes
State change:	Number of ROHC state changes
Pkts(RX):	Received ROHC packets
Pkts Rcvd:	Number of Packets received
Bytes Rcvd:	Number of bytes received
Decomp Pkts:	Number of decompressed packets sent out
Pkts Discarded:	Number of received packets discarded
Segmentation:	Number of output packets that got segmented.
Segment Pkts:	Number of ROHC segment packets received
Only Feedback:	Number of ROHC feedbacks that were NOT piggybacked to other ROHC packets
Piggyback FB:	Number of ROHC feedbacks that were piggybacked to other ROHC packets
Only FB packets:	Number of ROHC packets that carry ONLY multiple ROHC feedbacks.
Pkts(TX):	Transmitted ROHC packets
Pkts Sent:	Number of ROHC packets sent out
Bytes Sent:	Number of bytes sent out
Piggyback FB:	Number of Feedback packets sent as piggy back
Direct FB:	Number of Feedback packets sent without piggy back
Efficiency(RX):	Transmission Efficiency
Uncomp Hdr:	Number of uncompressed headers
Compressed Hdr:	Number of compressed headers
Percentage comp:	Percentage comparison
Histogram(RX):	Transmission Histogram
Size: <2:	Number less than 2

Field	Description
Size: <4:	Number less than 4
Size: <8:	Number less than 8
Size: <16:	Number less than 16
Size: >16:	Number greater than 16

Chapter 145

show rp

This chapter describes the output of the **show rp** command.

show rp

Table 370. show rp Command Output Descriptions

Field	Description
RP Summary	
RP Sessions In Progress	Indicates the total number of sessions being facilitated.
Registration Request/Reply	
Renew RRQ Accepted	Indicates the total number of registration request renewals accepted.
Discarded	Indicates the total number of registration requests that have been discarded.
Intra PDSN Active H/O RRQ Accept	The number of intra PDSN handoffs accepted for the session when it was active.
Intra PDSN Dormant H/O RRQ Accept	The number of intra PDSN handoffs accepted for the session when it was dormant.
Inter PDSN Handoff RRQ Accepted	Indicates the total number of registration requests for inter-PDSN handoffs that have been accepted.
Reply Send Error	Indicates the total number of registration replies for which errors were experienced during transmission.
Registration Update/Ack	
Initial Update Transmitted	Indicates the total number of registration updates that have been transmitted.
Update Retransmitted	Indicates the total number of registration updates that have been re-transmitted.
Denied	Indicates the total number of registration updates that have been denied by the PCF.
Not Acknowledged	Indicates the total number of registration updates and/or acknowledgements that have not been acknowledged by the PCF.
Reg Ack Received	Indicates the total number of registration acknowledgements that have been discarded.
Reg Ack Discarded	Indicates the total number of registration acknowledgements that have been received.
Update Send Error	Indicates the total number of registration updates for which errors were experienced during transmission.
Registration Update Send Reason	
Lifetime Expiry	Indicates the total number of registration updates that were sent due to the expiration of a lifetime timer during a subscriber session.
Upper Layer Initiated	Indicates the total number of registration updates that were initiated by upper processing layers.
Other Reasons	Indicates the total number of registration updates that were sent due to reasons other than those listed here.
Handoff Release	Indicates the total number of registration updates that were sent due to handoff releases.

Field	Description
Session Manager Died	Indicates the total number of registration updates that were sent due to the termination of Session Manager tasks. NOTE: If any data is reported for this field, there may be an issue with either the software or hardware. If you continue to experience problems, refer to the System Administration and Administration Reference for information on troubleshooting the problem.
Registration Update Denied	
Reason Unspecified	Indicates the total number of denied registration updates that were sent with a reply code of 80H (Registration Denied - reason unspecified).
Admin Prohibited	Indicates the total number of denied registration updates that were sent with a reply code of 81H (Registration Denied - administratively prohibited).
PDSN Failed Authentication	Indicates the total number of denied registration updates that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication).
Identification Mismatch	Indicates the total number of denied registration updates that were sent with a reply code of 85H (Registration Denied - identification mismatch).
Poorly Formed Update	Indicates the total number of denied registration updates that were sent with a reply code of 86H (Registration Denied - poorly formed request).
Session Update/Ack	
Initial Update Transmitted	Indicates the total number of session updates that have been transmitted.
Update Retransmitted	Indicates the total number of session updates that have been re-transmitted.
Denied	Indicates the total number of session updates that have been denied by the PCF.
Not Acknowledged	Indicates the total number of session updates that have not been acknowledged by the PCF.
Sess Update Ack Received	Indicates the total number of session acknowledgements that have been received.
Sess Update Ack Discarded	Indicates the total number of session acknowledgements that have been discarded.
Sess Update Send Error	Indicates the total number of session updates for which errors were experienced during transmission.
Session Update Send Reason	
Always On	Session Update message was sent to the PCF to notify the PCF that the subscriber has the Always On feature.
QoS Info	This is a session update statistic that is not supported at this time.
QoS Update Reason	
TFT Violation	Indicates that a TFT violation is the reason for QoS update.
Traffic Violation	Indicates that a traffic violation is the reason for the QoS update.
Traffic Policing	Indicates that a traffic policing action is the reason for the QoS update.
Operator Triggered	Indicates that an operator triggered the QoS update.
Session Update Denied	
Reason Unspecified	Indicates the total number of session updates denied with a code of 80H (Session Denied - reason unspecified).

Field	Description
Insufficient Resources	Indicates the total number of session updates denied with a status code of 82H (Session Denied - insufficient resources).
Admin Prohibited	Indicates the total number of denied session updates denied with a status code of 81H (Session Denied - administratively prohibited).
Parameter not updated	Indicates the total number of session updates denied with a status code of 82H (Session Denied - insufficient resources).
PDSN Failed Authentication	Indicates the total number of denied session updates denied with a status code of 83H (Session Denied - mobile node failed authentication).
Identification Mismatch	Indicates the total number of denied session updates denied with a status code of 85H (Session Denied - identification mismatch).
Poorly Formed Update	Indicates the total number of denied session updates denied with a status code of 86H (Session Denied - poorly formed request).
Data	
GRE Packets Received	Indicates the total number of Generic Routing Encapsulation (GRE) packets received.
GRE Bytes Received	Indicates the total number of Generic Routing Encapsulation (GRE) bytes received.
GRE Packets Sent	Indicates the total number of Generic Routing Encapsulation (GRE) packets transmitted.
GRE Bytes Sent	Indicates the total number of Generic Routing Encapsulation (GRE) bytes transmitted.
GRE Packets Sent in SDB Form	This indicates the total Packets sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF.
GRE Bytes Sent in SDB Form	This indicates the total Bytes sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF.
GRE Segmentation	
Total Packets Received with segmentation indication	Indicates the total number of Generic Routing Encapsulation (GRE) packets received with segmentation indication.
Total Packets Sent with segmentation indication	Indicates the total number of Generic Routing Encapsulation (GRE) packets sent with segmentation indication.
Total successful reassembly	Indicates the total number of Generic Routing Encapsulation (GRE) packets that were successfully reassembled.
Total packets processed without proper reassembly	Indicates the total number of Generic Routing Encapsulation (GRE) packets that were processed without proper reassembly.

show rp full username

Table 371. show rp full username Command Output Descriptions

Field	Description
Username	The subscriber's username.
Callid	The subscriber's call identification (callid) number.
Msid	The subscriber's mobile station identification (MSID) number.
MN Sess RefID	The reference identification (RefID) number received from the mobile node.
GRE Key	The Generic Routing Encapsulation (GRE) key used with the subscriber's session.
PCF Address	The IP address of the Packet Control Function (PCF) facilitating the subscriber's session.
PDSN Address	The IP address of the R-P interface on the Packet Data Service Node's that is facilitating the subscriber's session.
Lifetime	The maximum time that the session A10 connection can exist before it becomes expired. This value is assigned by the PDSN.
Remaining Lifetime	Remaining RP lifetime for the session.
SPI	The particular Security Parameter Index (SPI) that associates the PDSN and the PCF facilitating the session.
Service Option	RP service option for the session.
Flow Control State	Displays the Flow Control State for the session.
Prev System Id	System ID of the previous PCF for the session.
Current System Id	System ID of the current PCF for the session.
Prev Network Id	Network ID of the previous PCF for the session.
Current Network Id	Network ID of the current PCF for the session.
Prev Packet Zone Id	Packet zone ID of the previous PCF for the session.
Current Packet Zone Id	Packet zone ID of the current PCF for the session.
BSID	Base transceiver Station ID (Base Station ID) of the current PCF
A10 Connection	
GRE Receive	
Total Packets Rcvd	The total number of packets received for the A10 connection.
Total Bytes Rcvd:	The total number of bytes received for the A10 connection.
GRE Send	
Total Packets Sent	The total number of packets sent for the A10 connection.

Field	Description
Total Bytes Sent:	The total number of bytes sent for the A10 connection.
Data Over Signaling Packets:	The total number of Data Over Signaling packets sent for the A10 connection.
Data Over Signaling Bytes:	The total number of Data Over Signaling bytes sent for the A10 connection.
Registration Request/Reply	
Renew RRQ Accepted	The total number of registration request renewals accepted.
Discarded	The total number of registration requests replies that have been discarded.
Intra PDSN Active H/O RRQ Accept	The number of intra PDSN handoffs accepted for the session when it was active.
Intra PDSN Dormant H/O RRQ Accept	The number of intra PDSN handoffs accepted for the session when it was dormant.
Inter PDSN Handoff RRQ Accepted	The total number of registration requests for inter-PDSN handoffs that have been accepted.
Reply Send Error	The total number of registration replies for which errors were experienced during transmission.
Registration Update/Ack	
Initial Update Transmitted	The total number of registration updates that have been transmitted.
Update Retransmitted	The total number of registration updates that have been re-transmitted.
Denied	The total number of registration updates that have been denied by the PCF.
Not Acknowledged	The total number of registration updates and/or acknowledgements that have not been acknowledged by the PCF.
Reg Ack Received	The total number of registration acknowledgements that have been received.
Reg Ack Discarded	The total number of registration acknowledgements that have been received.
Update Send Error	The total number of registration updates for which errors were experienced during transmission.
Registration Update Send Reason	
Lifetime Expiry	The total number of registration updates that were sent due to the expiration of a lifetime timer during a subscriber session.
Upper Layer Initiated	The total number of registration updates that were initiated by upper processing layers.
Other Reasons	The total number of registration updates that were sent due to reasons other than those listed here.
Handoff Release	The total number of registration updates that were sent due to handoff releases.
Session Manager Exited	The total number of registration updates that were sent due to the termination of Session Manager tasks. NOTE: If any data is reported for this field, there may be an issue with either the software or hardware. If you continue to experience problems, refer to the System Administration and Administration Reference for information on troubleshooting the problem.
Registration Update Denied	

Field	Description
Reason Unspecified	The total number of denied registration updates that were sent with a reply code of 80H (Registration Denied - reason unspecified).
Admin Prohibited	The total number of denied registration updates that were sent with a reply code of 81H (Registration Denied - administratively prohibited).
PDSN Failed Authentication	The total number of denied registration updates that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication).
Identification Mismatch	The total number of denied registration updates that were sent with a reply code of 85H (Registration Denied - identification mismatch).
Poorly Formed Update	The total number of denied registration updates that were sent with a reply code of 86H (Registration Denied - poorly formed request).
Session Update/Ack	
Initial Update Transmitted	Indicates the total number of session updates that have been transmitted.
Update Retransmitted	Indicates the total number of session updates that have been re-transmitted.
Denied	Indicates the total number of session updates that have been denied by the PCF.
Not Acknowledged	Indicates the total number of session updates that have not been acknowledged by the PCF.
Sess Update Ack Received	Indicates the total number of session acknowledgements that have been received.
Sess Update Ack Discarded	Indicates the total number of session acknowledgements that have been discarded.
Sess Update Send Error	Indicates the total number of session updates for which errors were experienced during transmission.
Session Update Send Reason	
Always On	Session Update message was sent to the PCF to notify the PCF that the subscriber has the Always On feature.
QoS Info	This is a session update statistic that is not supported at this time.
QoS Update Reason	
TFT Violation	Indicates that a TFT violation is the reason for QoS update.
Traffic Violation	Indicates that a traffic violation is the reason for the QoS update.
Traffic Policing	Indicates that a traffic policing action is the reason for the QoS update.
Operator Triggered	Indicates that an operator triggered the QoS update.
Session Update Denied	
Reason Unspecified	Indicates the total number of session updates denied with a code of 80H (Session Denied - reason unspecified).
Insufficient Resources	Indicates the total number of session updates denied with a status code of 82H (Session Denied - insufficient resources).
Admin Prohibited	Indicates the total number of denied session updates denied with a status code of 81H (Session Denied - administratively prohibited).

Field	Description
Parameter not updated	Indicates the total number of session updates denied with a status code of 82H (Session Denied - insufficient resources).
PDSN Failed Authentication	Indicates the total number of denied session updates denied with a status code of 83H (Session Denied - mobile node failed authentication).
Identification Mismatch	Indicates the total number of denied session updates denied with a status code of 85H (Session Denied - identification mismatch).
Poorly Formed Update	Indicates the total number of denied session updates denied with a status code of 86H (Session Denied - poorly formed request).
Profile ID Not Supported	Indicates that the profile ID is not supported.
Handoff in Progress	Indicates that a handoff is in progress.
GRE Receive	
Total Packets Received	The total number of Generic Routing Encapsulation (GRE) packets received.
Protocol Type Error	The total GRE packets received with an unsupported protocol field in the header.
Total Bytes Received	The total number of Generic Routing Encapsulation (GRE) bytes received.
GRE Key Absent	The number of GRE packets received without a GRE key in the header.
GRE Checksum Error	GRE packets received that had a checksum error.
Invalid Packet Length	GRE packets received with invalid packet length.
GRE Send	
Total Packets Sent	The total number of Generic Routing Encapsulation (GRE) packets transmitted.
Total Bytes Sent	The total number of Generic Routing Encapsulation (GRE) bytes transmitted.
Total Packets Sent in SDB	The total Packets sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF.
Total Bytes Sent in SDB	The total Bytes sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF.
GRE Flow Control	
Total Packets Received with XOFF	The total number of packets received for this username while the flow control was set to XOFF.
Total Packets Received with XON	The total number of packets received for this username while the flow control was set to XON.
Total XON->XOFF Transactions	The total number of times the flow control indicator was changed from XON to XOFF for sessions involving this username.
Total Output Packets Dropped on XOFF	The total number of packets dropped after receiving an XOFF flow control command from the RAN.
Total Output Bytes Dropped on XOFF	The total number of bytes dropped after receiving an XOFF flow control command from the RAN.

Field	Description
Total RP sessions matching specified criteria	The total number of sessions that had the username specified on the command line.

show rp statistics pdsn-service

Table 372. show rp statistics pdsn-service Command Output Descriptions

Field	Description
PDSN Service	Displays the name of the PDSN services for which the statistics were gathered.
Session Stats	
Total Sessions Current	Indicates the total number of sessions that are in progress. These could be either active, dormant, being set up, or being disconnected.
Total Setup	Indicates the total number of sessions that have been successfully set up since system started.
Total Released	Indicates the total number of sessions that have successfully been disconnected.
Total Rev-A Sessions Current	Indicates the total number of Rev-A sessions that are in progress.
Total Rev-A Setup	Indicates the total number of Rev-A sessions that have been successfully set up since system started.
Total Rev-A Released	Indicates the total number of Rev-A sessions that have successfully been disconnected.
Total Downgraded from Rev-A to Rev-0	Indicates the total number of Rev-A sessions that have successfully been downgraded from Rev-A to Rev-0.
Session Releases	
De-registered	Indicates the total number of sessions that were disconnected through a normal de-registration process.
Lifetime Expiry	Indicates the total number of sessions that were disconnected due to the expiration of their lifetime timer.
PPP Layer Command	Indicates the number of sessions disconnected due to PPP initiating a tear-down.
PCF-Monitor Fail	The total number of sessions disconnected because the PCF monitor function detected that the PCF was down.
GRE Key Mismatch	The total number of sessions disconnected because the GRE key changed for a session.
Purged via Audit	The total number of sessions disconnected due to audit failures on session recovery .
Other Reasons	Indicates the number of sessions disconnected due to reasons other than those listed here.
Registration Request/Reply	
Total RRQ/Renew/Dereg RX	The total number of registration requests, renewals, and de-registrations received.
Total Accept	The total number of registration requests that have been accepted.
Total Denied	The total number of registration requests that have been rejected.
Total Discard	The total number of registration requests that have been discarded.
Init RRQRX	The total number of initial registration requests that have been received.

Field	Description
Init RRQ Accept	The total number of initial registration requests received and accepted.
Init RRQ Denied	The total number of initial registration requests received and rejected.
Init RRQ Discard	The total number of initial registration requests that have been received and discarded.
Init Setup/Start RRQ RX	The total number of initial setup or start registration requests that have been received.
Init Setup/Start RRQ Denied	The total number of initial start or setup registration requests that have been received and rejected.
Init Setup/Start RRQ Acc	The total number of initial start or setup registration requests that have been received and accepted.
Init Setup/Start RRQ Dis	The total number of initial start or setup registration requests that have been received and discarded.
Renew RRQ RX	The total number of registration request renewals received.
Renew RRQ Accept	The total number of registration request renewals received and accepted.
Renew RRQ Denied	The total number of registration request renewals received and rejected.
Renew RRQ Discard	The total number of registration request renewals received and discarded.
Renew No Airlink RX	The total number of registration request renewals received due to “No airlink”.
Renew No Airlink Accept	The total number of registration request renewals received due to “No airlink” and accepted.
Renew No Airlink Denied	The total number of registration request renewals received due to “No airlink” and denied.
Renew No Airlink Discard	The total number of registration request renewals received due to “No airlink” and discarded.
Renew Actv Start RX	The total number of RRQ renewals with an Active Start record received.
Renew Actv Start Accept	The total number of RRQ renewals with an Active Start record received and accepted.
Renew Actv Start Denied	The total number of RRQ renewals with an Active Start record received and denied.
Renew Actv Start Discard	The total number of RRQ renewals with an Active Start record received and discarded.
Renew Actv Stop RX	The total number of RRQ renewals with an Active Stop record received.
Renew Actv Stop Accept	The total number of RRQ renewals with an Active Stop record received and accepted.
Renew Actv Stop Denied	The total number of RRQ renewals with an Active Stop record received and denied.
Renew Actv Stop Discard	The total number of RRQ renewals with an Active Stop record received and discarded.
Dereg Active Stop Accept	The total number of de-registration requests with an active stop that were accepted.
Dereg RRQ RX	The total number of de-registration requests that have been received.
Dereg RRQ Accept	The total number of de-registration requests received and accepted.
Dereg RRQ Denied	The total number of de-registration requests received and rejected.
Dereg RRQ Discard	The total number of de-registration requests received and discarded.
Dereg No Active Stop RX	The total number of de-registration requests with a No Active Stop record received.

Field	Description
Dereg No Active Stop Accp	The total number of de-registration requests with a No Active Stop record received and accepted.
Dereg No Active Stop Denied	The total number of de-registration requests with a No Active Stop record received and denied.
Dereg No Active Stop Disc	The total number of de-registration requests with a No Active Stop record received and discarded.
Dereg Active Stop RX	The total number of de-registration request with an Active Stop record received.
Dereg Active Stop Accp	The total number of de-registration request with an Active Stop record received and accepted.
Reply Send Error	The total number of registration replies for which errors were experienced during transmission.
Airlink Seq Num Invalid	The total number of replies sent when an invalid airlink sequence number is received in RRQ.
Intra PDSN Active ANID HandoffRRQ RX	The total number of intra PDSN handoffRRQs with active Access Network Identifier (ANID) received.
Intra PDSN Active ANID HandoffRRQ Accepted	The total number of intra PDSN handoffRRQs with active ANID received and accepted.
Intra PDSN Active ANID HandoffRRQ Denied	The total number of intra PDSN handoffRRQs with active ANID received and denied.
Intra PDSN Active ANID HandoffRRQ Discarded	The total number of intra PDSN handoffRRQs with active ANID received and discarded.
Intra PDSN Dormant ANID HandoffRRQ RX	The total number of intra PDSN handoffRRQs with dormant ANID received.
Intra PDSN Dormant ANID HandoffRRQ Accepted	The total number of intra PDSN handoffRRQs with dormant ANID received and accepted.
Intra PDSN Dormant ANID HandoffRRQ Denied	The total number of intra PDSN handoffRRQs with dormant ANID received and denied.
Intra PDSN Dormant ANID HandoffRRQ Discarded	The total number of intra PDSN handoffRRQs with dormant ANID received and discarded.
Inter PDSN Active MEI ANID HandoffRRQ RX	The total number of inter PDSN handoffRRQs with active Mobility Event Indicator (MEI) and ANID received.
Inter PDSN Active MEI ANID HandoffRRQ Accepted	The total number of inter PDSN handoffRRQs with active MEI and ANID received and accepted.
Inter PDSN Active MEI ANID HandoffRRQ Denied	The total number of inter PDSN handoffRRQs with active MEI and ANID received and denied.
Inter PDSN Active MEI ANID HandoffRRQ Discarded	The total number of inter PDSN handoffRRQs with active MEI and ANID received and discarded.
Intra PDSN Active Handoff RRQ Accepted	Indicates the total number of registration requests received for active sessions going through an intra-PDSN handoff.
Intra PDSN Dormant Handoff RRQ Accepted	Indicates the total number of registration requests received for dormant sessions going through an intra-PDSN handoff.
Inter PDSN HandoffRRQ Accepted	Indicates the total number of registration requests received for sessions going through an inter-PDSN handoff.

Field	Description
Reply Send Error	Indicates the total number of registration replies for which errors were experienced during transmission.
Registration Request Denied	
Unspecified Reason	Indicates the total number of registration requests that were denied using reply code of 80H (Registration Denied - reason unspecified).
Admin Prohibited	Indicates the total number of registration requests that were denied using reply code of 81H (Registration Denied - administratively prohibited).
Insufficient Resources	Indicates the total number of registration requests that were denied using reply code of 82H (Registration Denied - insufficient resources).
PCF Failed Auth	Indicates the total number of registration requests that were denied using reply code of 83H (Registration Denied - mobile node failed authentication).
Identification Mismatch	Indicates the total number of registration requests that were denied using reply code of 85H (Registration Denied - identification mismatch).
Poorly Formed Request	Indicates the total number of registration requests that were denied using reply code of 86H (Registration Denied - poorly formed request).
Unknown PDSN Address	Indicates the total number of registration requests that were denied using reply code of 88H (Registration Denied - unknown PDSN address).
Reverse Tunnel Unavail	Indicates the total number of registration requests that were denied using reply code of 89H (Registration Denied - requested reverse tunnel unavailable).
Reverse Tunnel Required	Indicates the total number of registration requests that were denied using reply code of 8AH (Registration Denied - reverse tunnel is mandatory and "T"-bit not set).
Unrecognized Vendor Id	Indicates the total number of registration requests that were denied using reply code of 8DH (Registration Denied - unsupported vendor ID or unable to interpret data in the CVSE).
Session Already Closed	Renew and RRQ denied due to the session not present in the PDSN Dereq. Error code 0x8e.
RRQ Denied - Insufficient Resource Reasons	
No Session Manager	Indicates the total number of registration requests that were denied due to the lack of available Session Manager tasks. This may occur when the system is booting up in the event that a Session Manager task terminated unexpectedly.
No Memory	Indicates the total number of registration requests that were denied due to insufficient memory.
Session Managers Retried	Indicates that the system unsuccessfully attempted to try multiple Session Manager tasks to establish a session.
Input-Q Exceeded	Indicates that the queue in which incoming calls are kept prior to being processed exceeded its capacity.
Policy Rejected	The Registration Request was denied because the policy was rejected.
Session Manager Rejected	The Registration Request was rejected by the Session Manager.
All Manager Rejected	The Registration Request was rejected by the All Manager.
RRQ Denied - Poorly Formed Request Reasons	
Session Already Dormant	The number of RRQs that had Active Stop for a session that was already dormant.

Field	Description
Already Active	The number of RRQs that had Active Start for a session that was already active.
Airlink Setup Absent	The number of RRQs denied due to an absent connection-setup record in the initial RRQ.
Mismatched CoA/Src addr	The number of RPs denied due to a mismatch in the care-of-address field and the request source address.
Other Reasons	The number of RRQs denied due to other reasons for a badly formed RRQ.
RRQ Denied - Overload/Congestion Control	
Admin Prohibited (reject)	RRQs denied with error code 0x81h due to congestion control mechanism.
Unknown PDSN (redirect)	RRQs denied with error code 0x88 due to congestion control mechanism.
Registration Request Discard Reasons	
No Session Manager	Indicates the total number of registration requests that were discarded due to the lack of available Session Manager tasks. This may occur when the system is booting up in the event that a Session Manager task terminated unexpectedly.
No Memory	Indicates the total number of registration requests that were discarded due to insufficient memory.
Malformed	Indicates the total number of registration requests that were discarded due to being poorly formed.
Auth Failure	Indicates the total number of registration requests that were discarded due to the mobile node failing authentication.
Session Manager Dead	Indicates the total number of registration requests that were discarded due to the termination of Session Manager tasks. NOTE: If any data is reported for this field, there may be an issue with either the software or hardware. If you continue to experience problems, refer to the System Administration and Administration Reference for information on troubleshooting the problem.
Admin Prohibited	Indicates the total number of registration requests that were discarded due to being administratively prohibited.
Session Manager NotReady	Indicates the total number of registration requests that were discarded due to a Session Manager task not being ready. This may occur when the system is booting up in the event that a Session Manager task terminated unexpectedly.
Unknown PDSN	Indicates the total number of registration requests that were discarded due to the request specifying an unknown PDSN address.
Internal Bounce Error	Indicates that an internal communication message between an A11 Manager task and a Session Manager task bounced was not successfully sent.
Input-Q Exceeded	Indicates that the queue in which incoming calls are kept prior to being processed exceeded its capacity.
Max Sessions Reached	Indicates the total number of registration requests that were discarded due to the PDSN service reaching its configured maximum number of subscribers or the exceeding of the system's session capacity license.
Invalid Pkt Len	Indicates the total number of registration requests that were discarded due to having an invalid packet length.
GRE Key Changed	RRQs discarded due to GRE key change in RRQ message.

Field	Description
Overload/Congestion	RRQs discarded due to congestion control mechanism.
Dropped During Handoff	RRQs dropped during handoff.
Misc Reasons	Indicates the number of registration requests that were discarded due to reasons other than those listed here.
Registration Update/Ack	
Reg Update Transmitted	Indicates the total number of registration updates that were transmitted.
Accepted	Indicates the total number of registration updates that were accepted by the PCF.
Denied	Indicates the total number of registration updates that were denied.
Not Acknowledged	Indicates the total number of registration updates that were not acknowledged.
Initial Update TX	Indicates the total number of initial registration updates that were transmitted.
Update Re-TX	Indicates the total number of registration updates that were re-transmitted.
Reg Ack Received	Indicates the total number of registration acknowledgements that were received.
Reg Ack Discard	Indicates the total number of registration acknowledgements that were discarded.
Update Send Error	Indicates the total number of registration updates for which errors were experienced during transmission.
Registration Update Send Reason	
Lifetime Expiry	Indicates the total number of registration updates that were sent due to the expiration of a lifetime timer during a subscriber session.
Other Reasons	Indicates the total number of registration updates that were sent due to reasons other than those listed here.
Upper Layer Initiated	Indicates the total number of registration updates that were initiated by upper processing layers.
Handoff Release	Indicates the number of registration updates that were sent due to handoff releases.
Session Manager Exited	Indicates the number of registration updates that were sent due to the termination of a Session Manager task.
Registration Update Denied	
Reason Unspecified	Indicates the total number of denied registration updates that were sent with a reply code of 80H (Registration Denied - reason unspecified).
Admin Prohibited	Indicates the total number of denied registration updates that were sent with a reply code of 81H (Registration Denied - administratively prohibited).
PDSN Failed Auth	Indicates the total number of denied registration updates that were sent with a reply code of 83H (Registration Denied - mobile node failed authentication).
Identification Mismatch	Indicates the total number of denied registration updates that were sent with a reply code of 85H (Registration Denied - identification mismatch).
Poorly Formed Update	Indicates the total number of denied registration updates that were sent with a reply code of 86H (Registration Denied - poorly formed request).
Registration Ack Discard Reasons	

Field	Description
Session Absent	Indicates the total number of registration acknowledgements that were discarded due to the session having been already ended because the acknowledgement was late.
No Memory	Indicates the total number of registration acknowledgements that were discarded due to insufficient memory.
Malformed	Indicates the total number of registration acknowledgements that were discarded due to being poorly formed.
Auth Failure	Indicates the total number of registration acknowledgements that were discarded due to the mobile node failing authentication.
Internal Bounce Error	Indicates that an internal communication message between an A11 Manager task and a Session Manager task bounced (was not successfully sent).
Input-Q Exceeded	Indicates the number of times that the queue in which incoming calls are kept prior to being processed exceeded its capacity.
Mismatched Id	Indicates the total number of discarded registration acknowledgements due to reply code 85H (Registration Denied - identification mismatch).
Invalid Pkt Len	Indicates the total number of registration acknowledgements that were discarded due to having an invalid packet length.
Misc Reasons	Indicates the number of registration acknowledgements that were discarded due to reasons other than those listed here.
Session Update/Ack	
Sess Update Transmitted	This is a session update statistic that is not supported at this time.
Accepted	This is a session update statistic that is not supported at this time.
Denied	This is a session update statistic that is not supported at this time.
Not Acknowledged	This is a session update statistic that is not supported at this time.
Initial Update TX	This is a session update statistic that is not supported at this time.
Update Retransmitted	This is a session update statistic that is not supported at this time.
Sess Ack Received	This is a session update statistic that is not supported at this time.
Sess Ack Discarded	This is a session update statistic that is not supported at this time.
Sess Update Send Error	This is a session update statistic that is not supported at this time.
Session Update Send Reason	
Always On	Session Update message was sent to the PCF to notify the PCF that the subscriber has the Always On feature.
QoS Info	This is a session update statistic that is not supported at this time.
Session Update Denied	
Reason Unspecified	This is a session update statistic that is not supported at this time.
Insufficient Resources	This is a session update statistic that is not supported at this time.
Admin Prohibited	This is a session update statistic that is not supported at this time.

Field	Description
Parameter not updated	This is a session update statistic that is not supported at this time.
PDSN Failed Auth	This is a session update statistic that is not supported at this time.
Identification Mismatch	This is a session update statistic that is not supported at this time.
Poorly Formed Update	This is a session update statistic that is not supported at this time.
Session Update Ack Discard Reasons	
Session Absent	Indicates the total number of session acknowledgements that were discarded due to the session having been already ended because the acknowledgement was late.
No Memory	Indicates the total number of session acknowledgements that were discarded due to insufficient memory.
Malformed	Indicates the total number of session acknowledgements that were discarded due to being poorly formed.
Auth Failure	Indicates the total number of session acknowledgements that were discarded due to the mobile node failing authentication.
Internal Bounce Error	Indicates that an internal communication message between an A11 Manager task and a Session Manager task bounced (was not successfully sent).
Input-Q Exceeded	Indicates the number of times that the queue in which incoming calls are kept prior to being processed exceeded its capacity.
Mismatched Id	Indicates the total number of discarded session acknowledgements due to reply code 85H (Registration Denied - identification mismatch).
Invalid Packet Length	Indicates the total number of session acknowledgements that were discarded due to having an invalid packet length.
Misc Reasons	Indicates the number of session acknowledgements that were discarded due to reasons other than those listed here.
Security Violations	
Total Violations	Indicates the total number of security violations that occurred.
Bad SPI #	Indicates the total number of security violations that occurred due to the receipt of a Security Parameter Index (SPI) that was in the reserved range (0 through 255).
Bad Authenticator	Indicates the total number of security violations that occurred due to a mis-computed authentication field.
Unknown SPI #	Indicates the total number of security violations that occurred due to the receipt of a Security Parameter Index (SPI) that is not configured on the PDSN.
Missing MN-HA Auth Extension	Indicates the total number of security violations that occurred due to missing mobile node-home agent authentication extensions.
Missing Reg Update Auth Extension	Indicates the total number of security violations that occurred due to missing registration update authentication extensions.
GRE Receive	
Total Packets Received	Indicates the total number of Generic Routing Encapsulation (GRE) packets received.

Field	Description
Protocol Type Error	Indicates the total number of GRE packets received with an unsupported protocol type field in the header.
Total Bytes Received	Indicates the total number of Generic Routing Encapsulation (GRE) bytes received.
GRE Key Absent	Indicates the total number of GRE packets received with no GRE key in the header.
GRE Checksum Error	Indicates the number of errors that occurred in GRE packets.
Invalid Packet Length	Indicates the total number of GRE packets received with invalid packet lengths.
No Session Found	Indicates the total number of GRE packets received for which no sessions can be found.
GRE Send	
Total Packets Sent	Indicates the total number of Generic Routing Encapsulation (GRE) packets transmitted.
Total Bytes Sent	Indicates the total number of Generic Routing Encapsulation (GRE) bytes transmitted.
GRE Packets Sent in SDB Form	This indicates the total Packets sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF.
GRE Bytes Sent in SDB Form	This indicates the total Bytes sent with the Short Data Burst indication in the A10 data stream from the PDSN to the PCF.
GRE Flow Control	
Total Packets Received with XOFF	The total number of packets received for this username while the flow control was set to XOFF.
Total Packets Received with XON	The total number of packets received for this username while the flow control was set to XON.
Total XON->XOFF Transactions	The total number of times the flow control indicator was changed from XON to XOFF for sessions involving this username.
Total Output Packets Dropped on XOFF	The total number of packets dropped after receiving an XOFF flow control command from the RAN.
Total Output Bytes Dropped on XOFF	The total number of bytes dropped after receiving an XOFF flow control command from the RAN.
Total RP sessions matching specified criteria	The total number of sessions that had the username specified on the command line.
GRE Segmentation	
Total Packets Received with segmentation indication	Indicates the total number of Generic Routing Encapsulation (GRE) packets received with segmentation indication.
Total Packets Sent with segmentation indication	Indicates the total number of Generic Routing Encapsulation (GRE) packets sent with segmentation indication.
Total successful reassembly	Indicates the total number of Generic Routing Encapsulation (GRE) packets that were successfully reassembled.
Total packets processed without proper reassembly	Indicates the total number of Generic Routing Encapsulation (GRE) packets that were processed without proper reassembly.

Chapter 146

show session

This chapter describes the output of the **show session** command variants.

show session counters historical all

Table 373. show session counters historical all Command Output Descriptions

Header	Description
Intv	The identification number of the sample interval.
Timestamp	The approximate time the data was gathered. It is in the format YYYY:MM:DD:HH:MM:SS.
Number of Calls	
Arrived	Displays data for “total calls arrived” counters.
Rejected	Displays data for “total calls rejected” counters.
Connected	Displays data for “total calls connected” counters.
Disconn	Displays data for “total calls disconnected” counters.
Failed	Displays data for “total calls failed” counters.
Handoffs	Displays data for “total handoffs” counters.
Renewals	Displays data for “total renewal” counters.
(A+R+D+F+H+R) CallOps	Displays data for all call operations. This is a calculated value based on the following formula: (arrived + rejected + disconnected + failed + handoffs + renewals)

show session disconnect-reasons

Table 374. show session disconnect-reasons Header Descriptions

Field	Description
Session Disconnect Statistics	
Total Disconnects	The total number of sessions disconnected since the system was started or since the last time that session disconnect reasons was cleared.
Disconnect Reason	The reason sessions were disconnected. Only reasons that have disconnects associated with them are listed.
Num Disc	The number of sessions disconnected for the reason.
Percentage	The percentage of total disconnects.

show session disconnect-reasons verbose

Table 375.show session disconnect-reasons verbose Header Descriptions

Header	Description
Total Disconnects	The total number of sessions disconnected since the system was started or since the last time that session disconnect reasons was cleared.
Disconnect Reason	The reason sessions were disconnected. Only reasons that have disconnects associated with them are listed unless the verbose keyword is specified.
Num Disc	The number of sessions disconnected for the reason.
Percentage	The percentage of total disconnects.

In the following table, the indicator number at the end of the disconnect field name will vary depending upon the software build in which the `show session disconnect-reason` command is issued.

Table 376. show session disconnect-reasons Fields Descriptions

Field	Description
Unknown(0)	The total number of sessions disconnected due to unknown reason.
Admin-disconnect(1)	The total number of sessions disconnected due to any of the following reasons: - Sessions disconnected when the Administrator issues the <code>clear subscribers all</code> CLI command. - Sessions disconnected by ECS due to any of the following reasons: - Bearer does not contain active rules—when the last bearer has no rules left as part of some PCRF trigger. - Charging-action has the <code>flow action</code> parameter configured as <code>terminate-session</code>. - Sessions disconnected by Diameter Credit Control Application (DCCA) due to any of the following reasons: - Result code 4010 or 4012 is received at the command level, and for CCR-Initial and CCR-Update Credit Control Failure Handling (CCFH) is configured as Terminate or Retry-and-Terminate. - Result code 5003 or 5030 is received at the command level. - Abort-Session-Request message is received.
Remote-disconnect (2)	The total number of sessions disconnected by the remote system.
Local-disconnect(3)	The total number of sessions disconnected by local system.
No-resource (4)	The total number of sessions disconnected due to non-availability of resources.

Field	Description
Service-limit-exceeded (5)	The total number of sessions disconnected due to exceed in service limit.
PPP-LCP-negotiation-failed (6)	The total number of sessions disconnected due to LCP negotiation failed.
PPP-LCP-no-response (7)	The total number of sessions disconnected due to no response in PPP-LCP session.
PPP-LCP-loopback-detected (8)	The total number of sessions disconnected due to loop back detected in PPP-LCP.
PPP-LCP-max-retry-reached (9)	The total number of sessions disconnected due to maximum retries in PPP-LCP session.
PPP-LCP-echo-failed (10)	The total number of sessions disconnected due to PPP-LCP echo not received.
PPP-Auth-failed (11)	The total number of sessions disconnected due to authorization failed in PPP.
PPP-Auth-failed-no-AAA-response (12)	The total number of sessions disconnected due to authorization failed by no response on AAA server.
PPP-Auth-failed-no-peer-response (13)	The total number of sessions disconnected due to PPP authorization failed on no peer response.
PPP-Auth-failed-max-retry-reached (14)	The total number of sessions disconnected due to PPP authorization failed and reaching maximum retries limit.
Invalid-AAA-attr-in-auth-response (15)	The total number of sessions disconnected due to invalid AAA attributes in authorization response.
Could-not-apply-subscriber-ACL (16)	The total number of sessions disconnected due to inability in applying subscriber's Access Control List (ACL).
Could-not-provide-service (17)	The total number of sessions disconnected due to service is not available.
AAA-return-IP-address-not-valid (18)	The total number of sessions disconnected due to return IP address from AAA server is invalid.
Pool-IP-address-not-valid (19)	The total number of sessions disconnected due to IP address in pool is invalid.
PPP-IPCP-negotiation-failed (20)	The total number of sessions disconnected due to PPP-IPCP negotiation failed.
PPP-IPCP-no-response (21)	The total number of sessions disconnected due to no response in PPP-IPCP.
PPP-IPCP-max-retry-reached (22)	The total number of sessions disconnected due to maximum retries in PPP-IPCP session.
No-IPv4-address-for-subscriber (23)	The total number of sessions disconnected due to no IPv4 address are available for subscriber.
Inactivity-timeout (24)	The total number of sessions disconnected due to system time out limit for silence (ideal) reached.
Absolute-timeout (25)	The total number of sessions disconnected due to timeout in complete session.
Max-data-limit-exceeded (26)	The total number of sessions disconnected due to maximum data limit exceeded.
Invalid-source-IPv4-address (27)	The total number of sessions disconnected due to invalid IPv4 address of subscriber.
MSID-auth-failed (28)	The total number of sessions disconnected due to MSID authentication failed.
MSID-auth-failed-no-aaa-response (29)	The total number of sessions disconnected due to MSID authentication failed and/or no response from AAA server.
All-max-retry-reached (30)	The total number of sessions disconnected due to maximum limit for retries reached for All interface.

Field	Description
A11-lifetime-expired(31)	The total number of sessions disconnected due to A11 interface lifetime expired.
A11-msg-integrity-failure(32)	The total number of sessions disconnected due to failure in message integrity in A11 interface.
PPP-LCP-remote-disconnect(33)	The total number of sessions disconnected due to PPP-LCP remote disconnect.
Session-setup-timeout(34)	The total number of sessions disconnected due to timeout in setting up of session.
PPP-keepalive-failure(35)	The total number of sessions disconnected due to PPP keepalive attribute failure.
Flow-add-failed(36)	The total number of sessions disconnected due to fail in adding flow to session.
Call-type-detection-failed(37)	The total number of sessions disconnected due to failure in call type detection.
Wrong-ipcp-params(38)	The total number of sessions disconnected due to IPCP parameters are wrong.
MIP-remote-dereg(39)	The total number of sessions disconnected due to de-registration of Mobile IP on remote system.
MIP-lifetime-expiry(40)	The total number of sessions disconnected due to expiry of Mobile IP life time.
MIP-proto-error(41)	The total number of sessions disconnected due to protocol error in Mobile IP.
MIP-auth-failure(42)	The total number of sessions disconnected due to Mobile IP authentication failure.
MIP-reg-timeout(43)	The total number of sessions disconnected due to registration request timeout.
Invalid-dest-context(44)	The total number of sessions disconnected due to invalid destination context.
Source-context-removed(45)	The total number of sessions disconnected due to source context is removed from system.
Destination-context-removed(46)	The total number of sessions disconnected due to destination context is removed from system.
Required-service-address-unavailable(47)	The total number of sessions disconnected due to unavailability of required service address.
demux-mgr-failed-could-not-restart(48)	The total number of sessions disconnected due to failure in demux-mgr.
internal-error(49)	The total number of sessions disconnected due to some internal system error.
AAA-context-removed(50)	The total number of sessions disconnected due to AAA context is removed from system.
invalid-service-type(51)	The total number of sessions disconnected due to invalid service type.
mip-relay-req-failed(52)	The total number of sessions disconnected due to failure in Mobile IP relay request.
mip-rcvd-relay-failure(53)	The total number of sessions disconnected due to failure in Mobile IP received.
ppp_restart_inter_pdsn_handoff(54)	The total number of sessions disconnected due to restart in inter PDSN handoff.
gre-key-mismatch(55)	The total number of sessions disconnected due to mismatch in Generic Routing Encapsulation (GRE) key.
invalid-tunnel-context(56)	The total number of sessions disconnected due to invalid Tunnel context.
no-peer-lns-address(57)	The total number of sessions disconnected due to no peer LNS address
failed-tunnel-connect(58)	The total number of sessions disconnected due to failure in Tunnel connect.

Field	Description
l2tp-tunnel-disconnect-remote (59)	The total number of sessions disconnected due to tunnel disconnected by remote system.
l2tp-tunnel-timeout (60)	The total number of sessions disconnected due to tunnel timeout.
l2tp-protocol-error-remote (61)	The total number of sessions disconnected due to protocol error on remote system.
l2tp-protocol-error-local (62)	The total number of sessions disconnected due to protocol error on local system.
l2tp-auth-failed-remote (63)	The total number of sessions disconnected due to authorization failed on remote system.
l2tp-auth-failed-local (64)	The total number of sessions disconnected due to authorization failed on local system.
l2tp-try-another-lns-from-remote (65)	The total number of sessions disconnected due to remote system tried for another LNS.
l2tp-no-resource-local (66)	The total number of sessions disconnected due to non-availability of resource on local system.
l2tp-no-resource-remote (67)	The total number of sessions disconnected due to non-availability of resource on remote system.
l2tp-tunnel-disconnect-local (68)	The total number of sessions disconnected due to tunnel disconnected on local system.
l2tp-admin-disconnect-remote (69)	The total number of sessions disconnected by administrator on remote system.
l2tpmgr-reached-max-capacity (70)	The total number of sessions disconnected due to L2TP Manager logging facility reached to maximum logging capacity.
MIP-Reg-Revocation (71)	The total number of sessions disconnected due to a failure in Mobile IP registration revocation.
path-failure (72)	The total number of sessions disconnected due to path failure in connecting session.
Dhcp-Relay-IP-Validation-Failed (73)	The total number of sessions disconnected due to a failure with the validation of the IP addresses with DHCP relay method.
Gtp-unknown-pdp-addr-or-pdp-type (74)	The total number of sessions disconnected due to unknown PDP address or PDP type.
Gtp-all-dynamic-pdp-addr-occupied (75)	The total number of sessions disconnected due to all dynamic PDP addresses are occupied and no PDP address is available to allocate.
Gtp-no-memory-is-available (76)	The total number of sessions disconnected due to out of memory problem.
dhcp-relay-static-ip-addr-not-allowed (77)	The total number of sessions disconnected due to the mobile requesting the use of a static IP address when static IP address requests are not allowed.
dhcp-no-ip-addr-allocated (78)	The total number of sessions disconnected as no IP address is allocated on DHCP Server.
dhcp-ip-addr-allocation-tmr-exp (79)	The total number of sessions disconnected due to time expired for IP address allocation on DHCP Server.
dhcp-ip-validation-failed (80)	The total number of sessions disconnected due to a failure with the validation of the IP address. This occurs because the IP address returned by DHCP Server is not present in the static pool in the destination context.
dhcp-static-addr-not-allowed (81)	The total number of sessions disconnected due to a failure with IP address in the static pool on destination context is not allowed by DHCP Server.
dhcp-ip-addr-not-available-at-present (82)	The total number of sessions disconnected due to non availability of IP address on DHCP Server.

Field	Description
dhcp-lease-expired (83)	The total number of sessions disconnected due to expiration of IP address lease time.
lpool-ip-validation-failed (84)	The total number of sessions disconnected due to validation failure of IP address in IP pool.
lpool-static-ip-addr-not-allowed (85)	The total number of sessions disconnected due to specified static IP address is not allowed in IP pool.
static-ip-validation-failed (86)	The total number of sessions disconnected due to a failure in validation of static IP address on remote system.
static-ip-addr-not-present (87)	The total number of sessions disconnected due to allocated static address is removed or not available.
static-ip-addr-not-allowed (88)	The total number of sessions disconnected due to prohibition of defined static IP address.
radius-ip-validation-failed (89)	The total number of sessions disconnected due to a failure in IP address validation on RADIUS.
radius-ip-addr-not-provided (90)	The total number of sessions disconnected due to IP address is not provided by RADIUS.
invalid-ip-addr-from-sgsn (91)	The total number of sessions disconnected due to invalid IP address received from SGSN.
no-more-sessions-in-aaa (92)	The total number of sessions disconnected due to sessions cleared in AAA.
ggsn-aaa-auth-req-failed (93)	The total number of sessions disconnected due to authentication request failure between GGSN and AAA server.
conflict-in-ip-addr-assignment (94)	The total number of sessions disconnected due to conflict in IP address assignment.
apn-removed (95)	The total number of sessions disconnected due to APN removed during session.
credits-used-bytes-in (96)	The total number of sessions disconnected due to exceeding the incoming data/bytes credit.
credits-used-bytes-out (97)	The total number of sessions disconnected due to exceeding the outgoing data/bytes credit.
credits-used-bytes-total (98)	The total number of sessions disconnected due to exceeding the total data/bytes credit.
prepaid-failed (99)	The total number of sessions disconnected due to a failure in processing prepaid account information.
l2tp-ipsec-tunnel-failure (100)	The total number of sessions disconnected due to the IPSec tunnel being failed to connect.
l2tp-ipsec-tunnel-disconnected (101)	The total number of sessions disconnected due to the IPSec tunnel being disconnected.
mip-ipsec-sa-inactive (102)	The total number of sessions disconnected due to inactive security association (sa) of IPSec for specific Mobile IP address.
Long-duration-timeout (103)	The total number of sessions disconnected due to the expiration of the configured long-duration timer.
proxy-mip-registration-failure (104)	The total number of Proxy Mobile IP sessions disconnected due to Registration failures.
proxy-mip-binding-update (105)	The total number of Proxy Mobile IP sessions disconnected due to errors occurring during binding updates.

Field	Description
proxy-mip-inter-pdsn-handoff-require-ip-address (106)	The total number of Proxy Mobile IP sessions disconnected due to the mobile not providing the IP address it was assigned during IPCP negotiations resulting from inter-PDSN handoffs.
proxy-mip-inter-pdsn-handoff-mismatched-address (107)	The total number of Proxy Mobile IP sessions disconnected due to the mobile providing an IP address other than what it was assigned during IPCP negotiations resulting from inter-PDSN handoffs.
Local-purge (108)	The total number of sessions disconnected due to a locally-initiated purge.
failed-update-handoff (109)	The total number of sessions disconnected due to failure in update handoff.
closed_rp-handoff-complete (110)	The total number of sessions disconnected due to handoff completed.
closed_rp-duplicate-session (111)	The total number of sessions disconnected due to duplicate session.
closed_rp-handoff-session-not-found (112)	The total number of sessions disconnected due to hand off session not found.
closed_rp-handoff-failed (113)	The total number of sessions disconnected due to handoff failed for session.
pcf-monitor-keep-alive-failed (114)	The total number of sessions disconnected due to the expiration of the configured max-inactivity timer indicating that the PCF was unavailable.
call-internal-reject (115)	The total number of sessions disconnected due to call rejected internally.
call-restarted (116)	The total number of sessions disconnected due to call restarted on unknown reason.
a11-mn-ha-auth-failure (117)	The total number of sessions disconnected due to failure in authentication between Mobile node and Home Agent (HA).
a11-badly-formed (118)	The total number of sessions disconnected as A11 interface is formed badly.
a11-t-bit-not-set (119)	The total number of sessions disconnected due to t-bit is not set in interface.
a11-unsupported-vendor-id (120)	The total number of sessions disconnected due to unsupported vendor Id in interface.
a11-mismatched-id (121)	The total number of sessions disconnected due to mismatched Id in A11 interface.
mipha-dup-home-addr-req (122)	The total number of sessions disconnected due to duplicate home address request on HA.
mipha-dup-imsi-session (123)	The total number of sessions disconnected due to duplicate IMSI in session on HA.
ha-unreachable (124)	The total number of sessions disconnected due to unreachable HA.
IPSP-addr-in-use (125)	The total number of sessions disconnected due to IP Pool Sharing Protocol address is in use/not free on HA.
mipfa-dup-home-addr-req (126)	The total number of sessions disconnected due to duplicate home address request on FA.
mipha-ip-pool-busyout (127)	The total number of sessions disconnected due to IP pool busyout.
inter-pdsn-handoff (128)	The total number of sessions disconnected due to inter-PDSN handoff failure.
active-to-dormant (129)	The total number of sessions disconnected due to system enters to dormant state from active state.
ppp-renegotiation (130)	The total number of sessions disconnected due to failure/conflict in PPP renegotiation.
active-start-parameter-change (131)	The total number of sessions disconnected due to change in start parameters.

Field	Description
accounting-tariff-boundary (132)	The total number of sessions disconnected due to the closure of an accounting record based on configured tariff time.
all-disconnect-no-active-stop (133)	The total number of sessions disconnected due to All interface is not active or stopped.
nw-reachability-failed-reject (134)	The total number of sessions disconnected due to failure in network reachability and request rejected.
nw-reachability-failed-redirect (135)	The total number of sessions disconnected due to failure in network reachability and request redirected.
container-max-exceeded (136)	The total number of sessions disconnected due to the closure of an accounting record based on the configured maximum number of container changes being exceeded.
static-addr-not-allowed-in-apn (137)	The total number of sessions disconnected due to static IP address is not allowed in APN.
static-addr-required-by-radius (138)	The total number of sessions disconnected due to static IP address required by RADIUS.
static-addr-not-allowed-by-radius (139)	The total number of sessions disconnected due to static IP address is not allowed by RADIUS.
mip-registration-dropped (140)	The total number of sessions disconnected due to registration dropped for Mobile IP address.
counter-rollover (141)	The total number of sessions disconnected due to counter rollover.
constructed-nai-auth-failed (142)	The total number of sessions disconnected due to authentication failure in subscriber's Network Access Identifier (NAI).
inter-pdsn-service-optimize-handoff-disabled (143)	The total number of sessions disconnected due to disabled inter-PDSN service optimization handoff.
gre-key-collision (144)	The total number of sessions disconnected due to collision in Generic Routing Encapsulation (GRE) key.
inter-pdsn-service-optimize-handoff-triggered (145)	The total number of sessions disconnected when inter PDSN service optimization handoff triggered.
intra-pdsn-handoff-triggered (146)	The total number of sessions disconnected when intra-PDSN service optimization handoff triggered.
delayed-abort-timer-expired (147)	The total number of sessions disconnected due to abort timer duration expired.
Admin-AAA-disconnect (148)	The total number of sessions disconnected as AAA server disconnected Administratively.
Admin-AAA-disconnect-handoff (149)	The total number of sessions disconnected due to AAA handoff disconnected Administratively.
PPP-IPV6CP-negotiation-failed (150)	The total number of sessions disconnected due to IPv6CP negotiation failed.
PPP-IPV6CP-no-response (151)	The total number of sessions disconnected due to no response during IPv6CP negotiation.
PPP-IPV6CP-max-retry-reached (152)	The total number of sessions disconnected due to maximum retries failed on IPv6CP negotiation.
PPP-Restart-Invalid-source-IPv4-address (153)	The total number of sessions disconnected due to PPP restarted by invalid Pv4 address of source.
all-disconnect-handoff-no-active-stop (154)	The total number of sessions disconnected due to handoff in All interface is not active or stopped.

Field	Description
call-restarted-inter-pdsn-handoff (155)	The total number of sessions disconnected due to call restarted during inter PDSN handoff.
call-restarted-ppp-termination (156)	The total number of sessions disconnected due to call restarted on PPP termination.
mip-fa-resource-conflict (157)	The total number of sessions disconnected due to resource conflict on FA.
failed-auth-with-charging-svc (158)	The total number of sessions disconnected due to authentication failure in charging services.
mip-ha-dup-imsi-session-purge (159)	The total number of sessions disconnected due to clearing of duplicate IMSI in session on HA.
mip-ha-rev-pending-newcall (160)	The total number of sessions disconnected due to revival of pending new calls.
volume-quota-reached (161)	The total number of sessions disconnected due to allocated data quota volume reached.
duration-quota-reached (162)	The total number of sessions disconnected due to time-out reached.
gtp-user-auth-failed (163)	The total number of sessions disconnected due to a failure in user/subscriber authentication.
MIP-Reg-Revocation-no-lcp-term (164)	The total number of sessions disconnected due to termination of an MIP Session for a Revocation being received from the HA and the PDSN is not configured to send a LCP Terminate Request.
MIP-private-ip-no-rev-tunnel (165)	The total number of sessions disconnected due to no reverse tunnel for MIP.
Invalid-Prepaid-AAA-attr-in-auth-response (166)	The total number of sessions disconnected due to invalid Prepaid attribute in authentication response.
mip-ha-prepaid-reset-dynamic-newcall (167)	The total number of MIP HA sessions disconnected due to receiving MIP registration with a home address of 0.0.0.0.
gre-flow-control-timeout (168)	The total number of RP sessions disconnected due to the PCF not removing flow control for a specified amount of time if GRE flow control for RP sessions is enabled.
mip-paaa-bc-query-not-found (169)	The total number of sessions that were disconnected because the binding cache was not found.
mip-ha-dynamic-ip-addr-not-available (170)	The total number of MIP HA sessions that were disconnected because a dynamic IP address was not available.
a11-mismatched-id-on-handoff (171)	The total number of sessions disconnected due to a mismatched ID in the A11 interface during a handoff.
a11-badly-formed-on-handoff (172)	The total number of sessions disconnected because the A11 interface is formed badly during a handoff.
a11-unsupported-vendor-id-on-handoff (173)	The total number of sessions disconnected due to unsupported vendor Id in the A11 interface during a handoff.
a11-t-bit-not-set-on-handoff (174)	The total number of sessions disconnected due to t-bit is not set in the A11 interface during a handoff.
MIP-Reg-Revocation-i-bit-on (175)	The total number of Mobile IP sessions disconnected at the PDSN/FA due to Revocation received from HA (with I bit set).
a11-RRQ-Deny-Max-Count (176)	The total number of sessions disconnected due to failures in processing A11-Registration-Request despite retries of the message by the PCF.

Field	Description
Dormant-Transition-During-Session-Setup (177)	The total number of sessions disconnected because they entered the dormant state during session setup.
PPP-Rem-Reneg-Disc-Always-Cfg (178)	The total number of PPP sessions disconnected because they were renegotiated by the remote side by sending LCP Conf-req/nak/ack and the “always” option was used for the remote-renegotiation disconnect command/attribute.
PPP-Rem-Reneg-Disc-NAI-MSID-Mismatch (179)	The total number of PPP sessions disconnected because they were renegotiated by the remote side by sending LCP Conf-req/nak/ack and the “nai-prefix-msid-mismatch” option was used for the remote-renegotiation disconnect command/attribute.
mipha-subscriber-ipsec-tunnel-down (180)	The total number of subscribers disconnected because the IPSec tunnel facilitating their sessions went down.
mipha-subscriber-ipsec-tunnel-failed (181)	The total number of subscribers disconnected because an IPSec tunnel failed to be established.
mipha-subscriber-ipsecmgr-death (182)	The total number of subscribers disconnected because the IPSec Manager software task facilitating their sessions crashed.
flow-is-deactivated (183)	The total number of sessions disconnected because their respective flow was deactivated.
ecs-license-exceeded (184)	The total number of sessions disconnected because the licensed session capacity for the Enhanced Charging Service feature has been exceeded.
IPSG-Auth-failed (185)	The total number of sessions disconnected because IPSG authentication failed.
driver-initiated (186)	The total number of sessions disconnected due to driver initiation.
ims-authorization-failed (187)	The total number of sessions disconnected because of IMS authorization failures.
service-instance-released (188)	The total number of sessions disconnected because they were released by the service instances facilitating them.
flow-released (189)	The total number of sessions disconnected because their respective flows were released.
ppp-renego-no-ha-addr (190)	The total number of sessions disconnect because no HA address was supplied during PPP renegotiation.
intra-pdsn-handoff (191)	The total number of sessions disconnected during an intra-PDSN service handoff.
overload-disconnect (192)	The total number of sessions disconnected because the configured overload-disconnect threshold has been exceeded.
css-service-not-found (193)	The total number of sessions because the CSS service specified for handling the session was not found.
Auth-failed (194)	This is not supported at this time.
dhcp-client-sent-release (195)	The total number of sessions disconnected because the DHCP client sent a release.
dhcp-client-sent-nak (196)	The total number of sessions disconnected because the DHCP client sent a negative acknowledge message.
msid-dhcp-chaddr-mismatch (197)	The total number of sessions disconnected because the DHCP Client Hardware (MAC) Address (CHADDR) does not match with MSID of the ASN-GW session.
link-broken (198)	The total number of sessions disconnected because the link between the SGSN and the GGSN is broken resulting in the termination of ongoing Diameter Credit-Control sessions with the DIAMETER_LINK_BROKEN termination-cause.

Field	Description
prog-end-timeout(199)	The total number of sessions disconnected because the allowed BCMCS program limit time expires.
qos-update-wait-timeout(200)	The total number of sessions disconnected because the PDSN failed to update QoS for them.
css-synch-cause(201)	The total number of sessions disconnected because the session-audit between the ACS Manager task and Session Manager disconnects any dangling sessions in the Session Manager.
Gtp-context-replacement(202)	The total number of sessions disconnected due to GTP context replacement.
PDIF-Auth-failed(203)	The total number of sessions disconnected due to PDIF authentication process unable to set up a secure IPSec tunnel to subscriber.
l2tp-unknown-apn(204)	The total number of sessions disconnected due to unknown APN in L2TP message.
ms-unexpected-network-reentry(205)	The total number of sessions disconnected due unexpected network reentry by MS in WiMAX network.
r6-invalid-nai(206)	The total number of sessions disconnected due invalid NAI in R6 message in WiMAX network.
eap-max-retry-reached(207)	The total number of sessions disconnected due maximum retry limit for EAP authentication exhausted in WiMAX network.
vbm-hoa-session-disconnected(208)	vbm-hoa-session-disconnected
vbm-voa-session-disconnected(209)	vbm-voa-session-disconnected
in-acl-disconnect-on-violation(210)	in-acl-disconnect-on-violation
eap-msk-lifetime-expiry(211)	The total number of sessions disconnected due to EAP Master Session Key lifetime expiry in WiMAX network.
eap-msk-lifetime-too-low(212)	The total number of sessions disconnected due to EAP Master Session Key lifetime is too less to allow session.
inter-service-handoff(213)	The total number of sessions disconnected due to inter-service handoff in WiMAX network.
r6-max-retry-reached(214)	The total number of sessions disconnected due to maximum retry limit for R6 message exhausted in WiMAX network.
r6-nwexit-recd(215)	The total number of sessions disconnected due to network exit message received on R6 interface in WiMAX network.
r6-dereg-req-recd(216)	The total number of sessions disconnected due to de-registration message received on R6 interface in WiMAX network.
r6-remote-failure(217)	The total number of sessions disconnected due to remote peer failure on R6 interface in WiMAX network.
r6r4-protocol-errors(218)	The total number of sessions disconnected due to protocol error on R6 and/or R4 interface in WiMAX network.
wimax-qos-invalid-aaa-attr(219)	The total number of sessions disconnected due to invalid AAA attributes for QoS to a subscriber in WiMAX network.

Field	Description
npu-gre-flows-not-available(220)	The total number of sessions disconnected due to requested NPU GRE flow is not available for a subscriber in WiMAX network.
r4-max-retry-reached(221)	The total number of sessions disconnected due to maximum retry limit for R4 message exhausted in WiMAX network.
r4-nwexit-recd(222)	The total number of sessions disconnected due to network exit message received on R4 interface in WiMAX network.
r4-dereg-req-recd(223)	The total number of sessions disconnected due to de-registration message received on R4 interface in WiMAX network.
r4-remote-failure(224)	The total number of sessions disconnected due to remote peer failure on R4 interface in WiMAX network.
ims-authorization-revoked(225)	The total number of sessions disconnected due to IMS authorization revoked.
ims-authorization-released(226)	The total number of sessions disconnected due to IMS authorization released.
ims-auth-decision-invalid(227)	The total number of sessions disconnected due to invalid IMS authorization decision.
mac-addr-validation-failed(228)	The total number of sessions disconnected due to MAC address validation failure in WiMAX network.
excessive-wimax-pd-flows-configured(229)	The total number of sessions disconnected due to excessive packet data flows are configured in WiMAX network.
sgsn-cancel-location-subs-withdrawn(230)	The total number of sessions disconnected due to cancellation of the request to location substitution withdrawn.
sgsn-cancel-location-update(231)	The total number of sessions disconnected because the cancellation of the location update.
sgsn-mnr-expiry(232)	The total number of sessions disconnected due to manager expiry.
sgsn-identity-failure(233)	The total number of sessions disconnected due to identity check failure.
sgsn-security-failure(234)	The total number of sessions disconnected due to security verification failure.
sgsn-auth-failure(235)	The total number of sessions disconnected due to authentication failure.
sgsn-glu-failure(236)	The total number of sessions disconnected due to GLU failure.
sgsn-implicit-detach(237)	The total number of sessions disconnected due to an implicit detach.
sgsn-subscriber-moved-to-different-smgr-instanc(238)	The total number of sessions disconnected due to subscriber moving to a different SMGR instance.
sgsn-subscriber-moved-to-peer-sgsn(239)	The total number of sessions disconnected due to subscriber moving to a peer SGSN.
sgsn-dns-failure-inter-rau(240)	The total number of sessions disconnected due to DNS failure during Inter-RAU.
sgsn-context-response-failure(241)	The total number of sessions disconnected due to context response failure.
sgsn-hlr-not-found-for-imsi(242)	The total number of sessions disconnected due to HLR not found for particular IMSI.
sgsn-ms-init-detach(243)	The total number of sessions disconnected due to MS initiated detach.
sgsn-roaming-not-allowed(244)	The total number of sessions disconnected because MS was not allowed to roam.

Field	Description
sgsn-duplicate-context(245)	The total number of sessions disconnected due to duplicate context.
hss-profile-update-failed(246)	The total number of sessions disconnected due to failure of profile update.
inactive-without-activating-any-pdp(247)	The total number of sessions disconnected where session is inactive and no PDP context is activated from this session.
asnpc-idle-mode-timeout(248)	The total number of sessions disconnected due to configured idle mode timeout duration is exhausted for ASN paging controller in WiMAX network.
asnpc-idle-mode-exit(249)	The total number of sessions disconnected due to idle mode exit message for ASN paging controller in WiMAX network.
asnpc-idle-mode-entry-auth-failed(250)	The total number of sessions disconnected due to authentication failure during idle mode entry for ASN paging controller in WiMAX network.
asngw-invalid-qos-configuration(251)	The total number of sessions disconnected due to invalid QoS configuration for subscriber in WiMAX network.
sgsn-dsd-allgprswithdrawn(252)	The total number of sessions disconnected due to the SGSN receiving a DSD message, from the HLR, with “All GPRS subscription withdrawn” flag set to true. The SGSN responds as if receiving a cancel location (subscription withdrawn) and clears the subscriber fully using this disconnect reason.
r6-pmk-key-change-failure(253)	The total number of sessions disconnected due to primary master key change failure on R6 interface in WiMAX network.
sgsn-illegal-me(254)	The total number of sessions disconnected because the ME was illegal.
sess-termination-timeout(255)	The total number of sessions disconnected due to failure monitored through BS monitor keep-alive probe.
sgsn-sai-failure(256)	The total number of sessions disconnected due to error in SGSN attachment in registration state.
sgsn-rmc-removal(257)	The total number of sessions disconnected due to error in SGSN inbound SRNS in registration state.
sgsn-rai-removal(258)	The total number of sessions disconnected due to error in Update PDP Context Response message for direct tunnel functionality. Direct tunnel functionality at GGSN was expecting some fields which were not received in the Update PDP Context Response message. Hence, GGSN was not able to establish tunnel appropriately with SGSN or RNC.
sgsn-init-deact(259)	The total number of sessions disconnected at SGSN due to unknown PDP context.
ggsn-init-deact(260)	The total number of sessions disconnected at SGSN due to PDP authentication failed.
hlr-init-deact(261)	The total number of sessions disconnected at SGSN due to duplicate PDP context
ms-init-deact(262)	The total number of sessions disconnected at SGSN due to no response from GGSN.
sgsn-detach-init-deact(263)	The total number of sessions disconnected at SGSN due to failed response from GGSN.
sgsn-rab-rel-init-deact(264)	The total number of sessions disconnected at SGSN due to unknown APN.
sgsn-iu-rel-init-deact(265)	The total number of sessions disconnected at SGSN due to service request initiated deactivation.

Field	Description
sgsn-gtpu-path-failure(266)	The total number of sessions disconnected at SGSN due to attachment procedure initiated abort.
sgsn-gtpc-path-failure(267)	The total number of sessions disconnected at SGSN due to ISRAU initiated abort procedure.
sgsn-local-handoff-init-deact(268)	The total number of sessions disconnected at SGSN due to unknown APN.
sgsn-remote-handoff-init-deact(269)	The total number of sessions disconnected at SGSN due to MM context cleanup initiated abort procedure.
sgsn-gtp-no-resource(270)	The total number of sessions disconnected at SGSN due to unknown abort procedure.
sgsn-mc-no-resource(271)	The total number of sessions disconnected at SGSN due to abort procedure started by guard timeout.
sgsn-odb-init-deact(272)	The total number of sessions disconnected at SGSN due to abort procedure initiated on DHCP IP validate request.
sgsn-invalid-ti(273)	The total number of sessions disconnected due to id mismatch in MIPv6 session.
sgsn-actv-rejected-due-to-mc(274)	The total number of sessions disconnected as AAA session id not-found
sgsn-apn-restrict-vio(275)	The total number of sessions disconnected due to security associate rekeying failure.
sgsn-actv-rejected-by-sgsn(276)	The total number of sessions disconnected due to failure in relocation in ASN-PC service.
sgsn-abnormal-deact(277)	The total number of sessions disconnected due to failure in paging controller relocation in ASN PC service.
sgsn-actv-rejected-by-ggsn(278)	The total number of sessions disconnected due to mismatch in authentication policy.
sgsn-err-ind(279)	The total number of sessions disconnected as DELETE MS ENTRY message received by the ASN Paging Controller.
asngw-non-anchor-prohibited(280)	The total number of sessions disconnected due to non-anchor ASN GW being prohibited.
asngw-im-entry-prohibited(281)	The total number of sessions disconnected due to unknown reason.
Session-idle-mode-entry-timeout(282)	The total number of sessions disconnected Administratively.
session-idle-mode-exit-timeout(283)	The total number of sessions disconnected by remote system
asnpc-ms-power-down-nwexit(284)	The total number of sessions disconnected by local system.
asnpc-r4-nwexit-recd(285)	The total number of sessions disconnected due to non-availability of resources.
sgsn-iu-rel-before-call-est(286)	The total number of sessions disconnected because of Iu Release during call establishment when service limits exceeded.
ikev2-subscriber-ipsecmgr-death(287)	The total number of sessions disconnected due to LCP negotiation failed.
All-dynamic-pool-addr-occupied(288)	The total number of sessions disconnected due to no response in PPP-LCP session.
mip6ha-ip-addr-not-available(289)	The total number of sessions disconnected due to loop back detected in PPP-LCP.
bs-monitor-keep-alive-failed(290)	The total number of sessions disconnected due to failure monitored through BS monitor keep-alive probe.

Field	Description
sgsn-attach-in-reg-state(291)	The total number of SGSN sessions disconnected due to an error in the SGSN attachment during the registration state.
sgsn-inbound-srms-in-reg-state(292)	The total number of SGSN sessions disconnected due to an error in the SGSN inbound SRNS in a registration state.
dt-ggsn-tun-reestablish-failed(293)	The total number of SGSN sessions disconnected due to error in Update PDP Context Response message for direct tunnel functionality. Direct tunnel functionality at GGSN was expecting some fields which were not received in the Update PDP Context Response message. Hence, the GGSN was not able to establish a tunnel appropriately with the SGSN or the RNC.
sgsn-pdp-unknown(294)	The total number of SGSN sessions disconnected due to an unknown PDP context.
sgsn-pdp-auth-failure(295)	The total number of SGSN sessions disconnected because the PDP authentication failed.
sgsn-duplicate-pdp-context(296)	The total number of SGSN sessions disconnected due to duplicate PDP contexts.
sgsn-no-rsp-from-ggsn(297)	The total number of SGSN sessions disconnected because the SGSN does not receive a response from the GGSN.
sgsn-failure-rsp-from-ggsn(298)	The total number of SGSN sessions disconnected due to failed response from the GGSN.
sgsn-apn-unknown(299)	The total number of SGSN sessions disconnected due to an unknown APN.
sgsn-pdp-status-mismatch(300)	The total number of SGSN sessions disconnected due to deactivation initiated by a service request.
sgsn-attach-on-attach-init-abort(301)	The total number of SGSN sessions disconnected due to an attachment procedure-initiated abort.
sgsn-iu-rel-in-israu-init-abort(302)	The total number of SGSN sessions disconnected due to an ISRAU-initiated abort procedure.
sgsn-smgr-init-abort(303)	The total number of SGSN sessions disconnected because the SessMgr initiates an abort.
sgsn-mm-ctx-cleanup-init-abort(304)	The total number of SGSN sessions disconnected due to the MM context cleanup-initiated abort procedure.
sgsn-unknown-abort(305)	The total number of SGSN sessions disconnected due to an unknown abort procedure.
sgsn-guard-timeout-abort(306)	The total number of SGSN sessions disconnected because the abort procedure was started by the guard timer timeout.
vpn-bounce-dhcpip-validate-req(307)	The total number of SGSN sessions disconnected because the abort procedure was initiated upon receiving a DHCP IP validate request.
mipv6-id-mismatch(308)	The total number of sessions disconnected due to id mismatch in MIPv6 session.
aaa-session-id-not-found(309)	The total number of sessions disconnected as AAA session id not-found
x1/x5-max-retry-reached(310)	The total number of sessions disconnected due to security associate rekeying failure.
x1-nwexit-recd(311)	The total number of sessions disconnected due to failure in relocation in ASN-PC service.
x1-dereg-req-recd(312)	The total number of sessions disconnected due to failure in paging controller relocation in ASN PC service.
x1-remote-failure(313)	The total number of sessions disconnected due to mismatch in authentication policy.

Field	Description
x1x2-protocol-errors(314)	The total number of sessions disconnected as DELETE MS ENTRY message received by the ASN Paging Controller.
x2/x6-max-retry-reached(315)	The total number of sessions disconnected because the ASNGW TID entry was not found.
x2/x6-nwexit-recd(316)	The total number of sessions disconnected due to network exit message received on X2 interface in PHS network.
x2-dereg-req-recd(317)	The total number of sessions disconnected due to deregistration request received on X2 interface in PHS network.
x2-remote-failure(318)	The total number of sessions disconnected by remote system due to failure on X2 interface in PHS network.
x1-pmk-key-change-failure(319)	The total number of sessions disconnected due to primary master key change failure on X1 interface in PHS network.
SA-Rekeying-Failure(320)	The total number of sessions disconnected due to security associate rekeying failure.
Sess-sleep-mode-entry-timeout(321)	The total number of sessions disconnected due to session sleep mode entry timeout on PHS GW.
phsgw-non-anchor-prohibited(322)	The total number of sessions disconnected due to non-anchor PHS GW being prohibited.
asnpc-pc-relocation-failed(323)	The total number of sessions disconnected due to failure in relocation in ASN-PC service.
asnpc-pc-relocation(324)	The total number of sessions disconnected due to failure in paging controller relocation in ASN PC service.
auth_policy_mismatch(325)	The total number of sessions disconnected due to mismatch in authentication policy.
ike/ipsec-sa-lifetime-expired(326)	The total number of sessions disconnected due to IKE/IPsec security associate lifetime timer expiration.
asnpc-del-ms-entry-recd(327)	The total number of sessions disconnected as DELETE MS ENTRY message received by the ASN Paging Controller.
phspc-sleep-mode-timeout(328)	The total number of sessions disconnected due to sleep mode timeout by the PHS Paging Controller.
phspc-sleep-mode-exit(329)	The total number of sessions disconnected due to sleep mode exit by the PHS Paging Controller.
phspc-sleep-mode-entry-auth-failed(330)	The total number of sessions disconnected due to failed sleep mode entry authorization by the PHS Paging Controller.
phspc-ms-power-down-nwexit(331)	The total number of sessions disconnected due to ms power down network exit message received by the PHS Paging Controller.
phspc-x6-nwexit-recd(332)	The total number of PHS Paging Controller sessions disconnected due to network exit message received from X2 interface in PHS network.
invalid-nat-config(333)	The total number of sessions disconnected due to the following reasons: 1. SessMgr and ACSMgr are running in non-optimized mode. 2. An undefined NAT pool is configured for subscriber. NAT must be disabled if ACS is not running in optimized mode.
asngw-tid-entry-not-found(334)	The total number of sessions disconnected because the ASNGW TID entry was not found.

Field	Description
No-NAT-IP-Addr-for-subscriber(335)	The total number of sessions disconnected due to NAT IP address being unavailable during call setup for allocation to a subscriber.
excessive-phs-pd-flows-configured(336)	The total number of sessions disconnected due to configuration of excessive PHS pd flows.
phsgw-invalid-qos-configuration(337)	The total number of sessions disconnected due to invalid QoS configuration for subscriber in PHS network.
Interim-Update(338)	The total number of sessions disconnected due to Interim Update.
sgsn-inbound-attach-abort-radio-status-bad-lost(339)	The total number of SGSN sessions disconnected because the inbound attach requests aborted due to poor radio status or lost radio connections.
sgsn-inbound-irau-abort-radio-status-bad-lost(340)	The total number of SGSN sessions disconnected due to inbound IRAU requests aborting as the radio status was poor or the radio connection lost.
ike-keep-alive-failed(341)	The total number of sessions disconnected due to IKE keepalive failure.
sgsn-attach-abort-ms-suspend(342)	The total number of SGSN sessions disconnected due to attach requests aborting because MS was in suspend mode.
sgsn-inbound-irau-abort-ms-suspend(343)	The total number of SGSN sessions disconnected due to IRAU requests aborted when MS was in suspend mode.
duplicate-session-detected(344)	The total number of sessions disconnected due to detection of duplicate sessions for the same session id.
sgsn-xid-response-failure(345)	The total number of SGSN sessions disconnected due to XID response failure.
sgsn-nse-cleanup(346)	The total number of SGSN sessions disconnected due to record cleanup or reset on the network service entity (NSE).
sgsn-gtp-req-failure(347)	The total number of SGSN sessions disconnected due to failure of the GTPP request.
sgsn-imsi-mismatch(348)	The total number of SGSN sessions disconnected due to mismatches of the IMSIs.
sgsn-bvc-blocked(349)	The total number of SGSN sessions disconnected because the BSSGP Virtual Connection (BVC) was blocked.
sgsn-attach-on-inbound-irau(350)	The total number of SGSN sessions disconnected as the session was attached on inbound IRAU requests.
sgsn-attach-on-outbound-irau(351)	The total number of SGSN sessions disconnected while the session was attached on outbound IRAU requests.
sgsn-incorrect-state(352)	The total number of SGSN sessions disconnected due to incorrect state of network elements.
sgsn-t3350-expiry(353)	The total number of SGSN sessions disconnected due to expiry of the T-3350 timer.
sgsn-page-timer-expiry(354)	The total number of SGSN sessions disconnected due to expiry of the paging timer.
phsgw-tid-entry-not-found(355)	The total number of SGSN sessions disconnected due to local purging of PDP contexts.
sgsn-pdp-local-purge(357)	The total number of SGSN sessions disconnected due to local purging of PDP contexts.
sgsn-offload-phase2(360)	With Iu/Gb flex enabled, this is the total number of SGSN sessions disconnected when the subscribers has been forcefully cleared via phase2 offloading from one SGSN to another SGSN within the SGSN pool.

Field	Description
Remote-error-notification(362)	The total number of sessions disconnected due to remote error notification.
no-response(363)	The total number of sessions disconnected due to no response from any of the network entity.
PDG-Auth-failed(364)	The total number of sessions disconnected due to re-authorization failure at any stage.
mme-s1 AP-send-failed(365)	The total number of sessions disconnected due to message sent on S1 AP interface failed.
mme-egtpc-connection-failed(366)	The total number of sessions disconnected as connection between MME and eGTP service/node failed due to any reason.
mme-egtpc-create-session-failed(367)	The total number of sessions disconnected as session creation failed between MME and eGTP service/node.
mme-authentication-failure(368)	The total number of sessions disconnected as authentication procedure failed between MME and HSS.
mme-ue-detach(369)	The total number of sessions disconnected as UE detached explicitly.
mme-mme-detach(370)	The total number of sessions disconnected on serving MME due to detach procedure occurred between anchored MME and service MME.
mme-hss-detach(371)	The total number of sessions disconnected due to DETACH procedure started from HSS.
mme-pgw-detach(372)	The total number of sessions disconnected due to DETACH procedure started from P-GW.
mme-sub-validation-failure(373)	The total number of sessions disconnected as subscriber validation failed at MME or HSS during authentication procedure.
mme-hss-connection-failure(374)	The total number of sessions disconnected due to connection failure between MME and associated HSS during authentication procedure.
mme-hss-user-unknown(375)	The total number of sessions disconnected by MME service due to UNKNOWN USER response from HSS during authentication procedure.
dhcp-lease-mismatch-detected(376)	The total number of sessions disconnected due to mismatch in DHCP lease time mismatch.
nemo-link-layer-down(377)	The total number of disconnected sessions due to the NEMO (Network Mobility) link layer being down.
sgsn-offload-phase3(379)	With Iu/Gb flex enabled, this is the total number of SGSN sessions disconnected when the subscribers has been forcefully cleared via phase3 offloading from one SGSN to another SGSN within the SGSN pool.
mbms-bearer-service-disconnect(380)	The total number of sessions disconnected due to disconnect in MBMS bearer service.
disconnect-on-violation-odb(381)	The total number of sessions disconnected due to violation on Operator Determined Barring (ODB) of services.
disconn-on-violation-focs-odb(382)	The total number of sessions disconnected due to violation on Operator Determined Barring (ODB) of Free-of-Charge Service (FOCS).
CSCF-REG-Admin-disconnect(383)	The total number of CSCF sessions disconnected through CLI registration clearing by administrator.
CSCF-REG-User-disconnect(384)	The total number of CSCF sessions disconnected by UE with an explicit deregister message.

Field	Description
CSCF-REG-Inactivity-timeout(385)	The total number of CSCF sessions disconnected due to registration expiry.
CSCF-REG-Network-disconnect(386)	The total number of CSCF sessions disconnected due to network-initiated deregistration.
CSCF-Call-Admin-disconnect(387)	The total number of CSCF sessions disconnected through CLI call clearing by administrator.
CSCF-Call-User-disconnect(388)	The total number of CSCF sessions disconnected by UE using BYE message.
CSCF-CALL-Local-disconnect(389)	The total number of CSCF sessions disconnected locally due to some processing failure, task death, recovery failure, etc.
CSCF-CALL-No-Resource(390)	The total number of CSCF sessions disconnected because locally due to congestion caused by max calline/flow usage from high cpu/memory utilization in sessmgr.
CSCF-CALL-No-Response(391)	The total number of CSCF sessions disconnected due to response timeout (SIP response code 408).
CSCF-CALL-Inactivity-timeout(392)	The total number of CSCF sessions disconnected due to session timer timeout
CSCF-CALL-Media-Auth-Failure(393)	The total number of CSCF sessions disconnected due to media authorization failure.
CSCF-REG-No-Resource(394)	The total number of CSCF sessions disconnected because register message is rejected due to congestion caused by max calline/flow usage from high cpu/memory utilization in sessmgr.
ms-unexpected-idle-mode-entry(395)	The total number of sessions disconnected while MS unexpectedly started the IDLE mode procedure and enters the Idle mode.
Re-Auth-failed(396)	The total number of sessions disconnected during re-authentication when MS started activation after coming out of idle mode.
sgsn-pdp-nse-cleanup(397)	The total number of SGSN sessions disconnected because the NSE configured in the GPRS service is removed and there are PDP contexts associated with the subscribers attached in this NSE.
sgsn-mm-ctxt-gtp-no-resource(398)	The total number of SGSN sessions disconnected because an SGTP service could not be assigned to an MM context.
unknown-apn(399)	The total number of sessions disconnected due to invalid and/or unknown APN name received from AAA or subscriber template.
gtpc-path-failure(400)	The total number of sessions disconnected due to failure of GTP-C interface path between two nodes.
gtpu-path-failure(401)	The total number of sessions disconnected due to failure of GTP-U interface path between two nodes.
actv-rejected-by-ggsn(402)	The total number of sessions disconnected due as session activation procedure, started by an MS which was in idle mode, was rejected by GGSN.
sgsn-pdp-gprs-camel-release(403)	The total number of PDP activation failures due to release from CAMEL. <i>This counter is visible but not yet fully supported.</i>
sgsn-check-imei-failure(404)	The total number of of Attaches / RAUs rejected due to failure in the IMEI checking (i.e. due either to black listing or to grey listing and an SGSN operator policy is configured with deny-grey-list).

Field	Description
sgsn-sndcp-init-deact(405)	The total number of PDP contexts deactivated upon receiving a cleanup indication from the Sndcp layer.
sgsn-pdp-inactivity-timeout(406)	The total number of subscribers detached or PDP context(s) deactivated due to subscriber inactivity during a configured (in the SGSN operator policy) time.
No-IPv6-address-for-subscriber(410)	The total number of disconnects due to No-IPv6-address-for-subscriber.
prefix-registration-failure(411)	The total number of disconnects due to prefix-registration-failure.
disconnect-from-policy-server(412)	The total number of sessions disconnected due to disconnect from policy server.
s6b-auth-failed (413)	The total number of subscriber sessions disconnected due to failure of authentication over S6b interface with HSS. This support is added for interoperability of GGSN with P-GW and HA.
gtpc-err-ind(414)	The total number of sessions disconnected due to a GTP control plane error indication message.
gtpu-err-ind(415)	The total number of sessions disconnected due to a GTP user plane error indication message.
invalid-pdn-type(416)	The total number of sessions disconnected due to an invalid PDN-type error.
aaa-auth-req-failed(417)	The total number of sessions disconnected due to a AAA authentication request failure.
apn-denied-no-subscription (418)	The total number of subscriber sessions disconnected due to denial of APN as requested APN was not subscribed to subscriber.
sgw-context-replacement(419)	The total number of sessions disconnected due to an S-GW context replacement.
dup-static-ip-addr-req (420)	The total number of subscriber sessions disconnected due to new session request received with duplicate IP address at GGSN. This support is added for interoperability of GGSN with P-GW and HA.
apn-restrict-violation (421)	The total number of subscriber sessions disconnected due to violation of level of restriction to ensure controlled co-existence of the Primary PDP Contexts in APN.
invalid-wapn(422)	The total number of sessions disconnected due to invalid or no W-APN details received from the UE.
ttg-nsapi-allocation-failed(423)	The total number of TTG sessions disconnected due to an NSAPI (Network Service Access Point Identifier) allocation failure.
mandatory-gtp-ie-missing(424)	The total number of sessions disconnected due to the unavailability of a mandatory GTP Information-Element during PDP context creation.
aaa-unreachable(425)	The total number of sessions disconnected due to unreachable AAA server.
asngw-service-flow-deletion(426)	Sent in the Accounting-Stop message for the particular service flow when that service flow is deleted by the Network- or MS-initiated service flow detection procedure.
CT-PMIP-RRQ-NVSE-Value-Change(427)	The total number of disconnects resulting from a PMIP (Proxy-MIP) registration request (RRQ) returning an NVSE (Normal/Vendor organization Special Extension) value change [WiMAX].
ssl-handshake-failed (430)	The total number of disconnected SSL sessions due to a handshake failure.
ssl-renegotiate-failed (431)	The total number of disconnected SSL sessions due to a renegotiation failure.

Field	Description
ssl-bad-message(432)	The total number of disconnected SSL sessions due to corrupted messages.
ssl-alert-received(433)	The total number of disconnected SSL sessions due to an alert.
ssl-disconnect(434)	The total number of SSL disconnections.
ssl-migration(435)	The total number of SSL migrations.
sgsn-ard-failure(436)	The total number of session disconnects due to ARD (access restriction data) subscription restriction received from the HLR.
sgsn-camel-release(437)	The total number of session disconnects experienced by the SGSN when Detach/Attach Rejects were due to explicit "Release GPRS" received from the CAMEL component GSM-SCF or due to failures during CAMEL handling.
sgsn-egtpc-connection-failed(438)	Replaced by sgsn-egtpc-create-session-failed(439) in Release 14.0.
sgsn-egtpc-create-session-failed(439)	Supported in Release 14.0 Counter
sgsn-hss-detach(440)	Replaced by sgsn-cancel-location-subs-withdrawn(230) in Release 14.0.
sgsn-hss-connection-failure(441)	Replaced by sgsn-glu-failure(236) in Release 14.0
sgsn-pgw-detach(442)	Not yet supported.
sgsn-s5-no-support-for-apn(443)	Supported in Release 14.0.
sgsn-no-rab-for-gbr-bearer(444)	Not yet supported. In development for future use.
sgsn-sgw-selection-failure(445)	Supported in Release 14.0. The total number of session disconnects resulting from the S4-SGSN's inability to establish a PDP context in the following scenario: 1. Either EPS or GPRS subscription is used. 2. S4-SGSN chooses S4 interface for PDP activation because • The UE is EPC-capable. • EGTP service is configured. • Operator Policy does not override the core-nw-interface to Gn. 3. The SGSN successfully resolves P-GW address (S5/S8 address) for the APN requested. 4. The SGSN tries S-GW resolution. If the DNS response fails and no local S-GW is configured for the RAI, then the PDP activation is rejected with this disconnect reason.
sgsn-pgw-selection-failure(446)	Supported in Release 14.0. The total number of sessions disconnected by the S4-enabled SGSN when the P-GW DNS resolution fails due to any cause other than the DNS response does not contain an S5/S8 address.
wimax-hotlining-status-change(447)	The total number of disconnects resulting from a status change in the Hotlining-Capabilities sub-attribute in the WiMAX-Capabilities attribute.
ggsn-no-rsp-from-sgsn(448)	The total number of sessions disconnected on GGSN node due to no response received from SGSN for a request.

Field	Description
mipha-dup-wimax-session(453)	The total number of WiMAX session disconnects resulting from duplicate Mobile IP Home Agent (MIPHA) logins.
invalid-version-attr(454)	This disconnect reason is set, if there is mismatch of WiMAX-Release version supported by ASNGW and that supported by AAA. This statistic is incremented when there is a mismatch of WiMAX-Release version supported by ASNGW and that supported by AAA. AAA sends WiMAX release in Radius packet. This statistic is cumulative for all ASNGW services configured on the system.
sgsn-zone-code-failure(455)	The total number of session disconnects experienced by the SGSN due to verification failure during the zone-code checking procedure.
invalid-qci(456)	The total number of session disconnects resulting from the receipt of invalid QoS class identifiers (QCIs). This error is returned if an invalid QCI is used in certain operations such as create bearer, which expects a QCI. A QCI is deemed invalid if it is not a standard QCI (1-9) or the QCI is not defined in the QCI table associated with the service.
mme-init-ctxt-setup-failure (459)	The total number of session disconnects resulting from context setup failures in the ENodeB during EMM/ECM procedures.
mme-driver-initiated(460)	The total number of session disconnects resulting from the default value for mme-sessions.
mme-s1ap-connection-down(461)	The total number of session disconnects resulting from S1 AP connection failures.
mme-s1ap-reset-recd (462)	The total number of session disconnects resulting from partial or full resets received for the S1 connection.
mme-s6a-response-timeout(463)	The total number of session disconnects resulting from requests to the HSS that timed out (AIR or ULR).
mme-s13-response-timeout (464)	The total number of session disconnects resulting from EIR query time outs.
mme-Illegal-equipment(465)	The total number of session disconnects resulting from EIR query failures.
mme-unexpected-attach(466)	The total number of session disconnects resulting from older sessions getting disconnected due to the UE executing an ATTACH procedure.
mme-sgw-selection-failure (467)	The total number of session disconnects resulting from failed selections of S-GWs for the UE's current location.
mme-pgw-selection-failure (468)	The total number of session disconnects resulting from failed selections of P-GWs for default APNs.
mme-reselection-to-sgsn (469)	The total number of session disconnects resulting from a context request from an SGSN relocated call to 3G.
mme-relocation-to-sgsn (470)	The total number of session disconnects resulting from calls transitioned to an SGSN using handover signaling.
mme-reselection-to-mme(471)	The total number of session disconnects resulting from a context request from an MME relocated call to a different MME.
mme-relocation-to-mme(472)	The total number of session disconnects resulting from calls transitioned to an MME using handover signaling.
mme-tau-attach-collision (473)	The total number of session disconnects resulting from processing a TAU request with a foreign GUTI that cleared an existing session on the MME.

Field	Description
mme-old-sgsn-resolution-failure (474)	The total number of session disconnects resulting from calls setup using a PTMSI that failed due to failure in resolution of the old SGSN context.
mme-old-mme-resolution-failure (475)	The total number of session disconnects resulting from calls setup using a foreign GUTI that failed due to a failure in resolution of the old MME context.
mme-reloc-ho-notify-timeout (476)	The total number of session disconnects resulting from a handover based session origination failure due to an ho-notify timeout.
mme-reloc-ho-req-ack-timeout (477)	The total number of session disconnects resulting from a handover based session origination failure due to an ho-request-ack timeout.
mme-create-session-timeout (478)	The total number of session disconnects resulting from a create session request to the S-GW that timed out.
mme-create-session-failure (479)	The total number of session disconnects resulting from a create session request to the S-GW that returned a failure response.
mme-s11-path-failure (480)	The total number of session disconnects resulting from a call cleared due to an S11 path failure.
mme-policy-no-ue-irat (481)	The total number of session disconnects resulting from a call cleared due to policy restrictions on inter-rat handovers.
mme-x2-handover-failed (482)	The total number of session disconnects resulting from a call cleared due to failures in x2 handovers.
mme-attach-restrict (483)	The total number of session disconnects resulting from an operator policy based attach restriction.
mme-regional-zone-code (484)	The total number of session disconnects resulting from the UE being in a zone code where the UE is not allowed to roam.
mme-no-response-from-ue (485)	The total number of session disconnects resulting from the maximum retransmission of a NAS message during session setup.
mme-sgw-relocation-failed (486)	The total number of session disconnects resulting from an S-GW relocation procedure failing.
mme-implicit-detach (487)	The total number of session disconnects resulting from the UE being implicitly detached due to inactivity.
sgsn-detach-notify (488)	Replaced by sgsn-isr-mme-init-detach(505) in Release 14.0.
policy-initiated-release(489) in StarOS 12.1 and earlier releases	
gy-result-code-system-failure (490) in StarOS 12.1 and earlier releases	The total number of sessions disconnected due to failure result codes received from the Online Charging Server that resulted in system failure on the GTP side.
emergency-inactivity-timeout (491) in StarOS 12.1 and earlier releases	The total number of sessions disconnected due to emergency inactivity timeout. The emergency session inactivity timeout is set on an APN configured as an emergency APN for VoLTE-based E911 support.
mme-zone-code-validation-failed (492)	The total number of session disconnects resulting from the UE being in a zone code where the UE is not allowed to roam.
sgsn-pgw-init-deact(493)	Supported in Release 14.0.
s6b-ip-validation-failed(494)	Not supported in releases 12.0 or 12.2 - in development for future use.

Field	Description
sgsn-failure-rsp-from-sgw(495)	Supported in Release 14.0.
tcp-remote-close (496)	The total number of sessions disconnected due to a TCP FIN (finished sending) message received from the UE.
tcp-reset-received (497)	The total number of sessions disconnected due to a TCP RST (reset) message received from the UE.
tcp-socket-error (498)	The total number of sessions disconnected due to a socket error received from the trek stack at the access-side TCP socket connection between the UE and the TTG.
ptmsi-signature-mismatch(499)	
camel-invalid-configuration(500)	Supported in Release 14.0.
mme-isr-sgsn-init-detach(502)	Supported in Release 14.0.
sgsn-isr-addl-ptmsi-rai(503)	Supported in Release 14.0.
sgsn-sgw-dbr-cause-isr-deact(504)	Supported in Release 14.0.
sgsn-isr-mme-init-detach(505)	Supported in Release 14.0.
mme-sgw-dbr-cause-isr-deact(506)	Supported in Release 14.0.
sgsn-ptmsi-crunch(507)	Supported in Release 14.0.
3Gto4G-context-replacement(508)	Supported in Release 14.0.
sgsn-actv-reject-on-dns-failure(509)	Never used. Removed in Release 14.0.
mme-no-eps-bearers-activated(509)	Supported in Release 14.0.
sgsn-nrspca-actv-rej-by-sgsn(515)	For future use.
sgsn-nrspca-actv-rej-by-ms(516)	For future use.

show session progress

Table 377. show session progress Command Output Descriptions

Field	Description
In-progress calls	The number of calls that are currently in progress (active, dormant, being set up, or being disconnected) and being processed by either the system (if no keywords were used), a specific PDSN service (if the pdsn-service keyword was used), or a specific PCF (if the pcf keyword was used).
In-progress active calls	The total number of active sessions.
In-progress dormant calls	The total number of dormant sessions.
In-progress always-on calls	The number of calls that have always on enabled.
In-progress calls @ ARRIVED state	The total number of sessions that are at the onset of the registration process.
In-progress calls @ LCP-NEG state	The total number of sessions that are in the Link Control Protocol (LCP) negotiation phase of the registration process.
In-progress calls @ LCP-UP state	The total number of sessions that have just completed the Link Control Protocol (LCP) negotiation phase of the registration process.
In-progress calls @ AUTHENTICATING state	The total number of sessions that are in the process of being authenticated.
In-progress calls @ BCMCS SERVICE AUTHENTICATING state	The total number of BCMCS sessions that are in the process of being authenticated.
In-progress calls @ MBMS UE AUTHORIZING state	The total number of MBMS sessions currently in UE authorization state.
In-progress calls @ MBMS BEARER AUTHORIZING state	The total number of MBMS sessions currently in bearer authorization state.
In-progress calls @ AUTHENTICATED state	The total number of sessions that have just completed the authentication phase of the registration process.
In-progress calls @ L2TP-LAC CONNECTING state	The number of calls that have an L2TP tunnel in the process of being brought up.
In-progress calls @ DHCP PENDING state	The total number of DHCP calls that are currently in pending state.
In-progress calls @ IPCP-UP state	The total number of sessions that have just completed the Internet Protocol Control Protocol (IPCP) phase of the registration process.
In-progress calls @ NON-ANCHOR CONNECTED state	Indicates the total number of WiMAX sessions being processed by this Session Manager instance that are currently being in connected state in non-anchor mode.
In-progress calls @ SIMPLE IPv4 CONNECTED state	The total number of IPv4 data sessions that are currently connected.

Field	Description
In-progress calls @ SIMPLE IPv6 CONNECTED state	The total number of IPv6 data sessions that are currently connected.
In-progress calls @ SIMPLE-IP CONNECTED state	The total number of Simple IP data sessions that are currently connected.
In-progress calls @ MOBILE-IP CONNECTED state	The total number of Mobile IP data sessions that are currently connected.
In-progress calls @ PROXY-MOBILE-IP CONNECTED state	The total number of Proxy Mobile IP data sessions that are currently connected.
In-progress calls @ HA-IPSEC CONNECTED state	The number of calls that have negotiated IP Security.
In-progress calls @ L2TP-LAC CONNECTED state	The number of calls that are passing data through an L2TP tunnel.
In-progress calls @ HNBGW CONNECTED state	The number of UMTS-Femto calls connected to HNB-GW.
In-progress calls @ PDP-TYPE-IPv4 CONNECTED state	The total number of PDP-type IPv4 data sessions that are currently connected.
In-progress calls @ PDP-TYPE-IPv6 CONNECTED state	The total number of PDP-type IPv6 data sessions that are currently connected.
In-progress calls @ PDP-TYPE-IP CONNECTED state	The total number of PDP contexts of type IP that are currently connected. This field applies to GGSN only.
In-progress calls @ PDP-TYPE-PPP CONNECTED state	The total number of PDP contexts of type PPP that are currently connected. This field applies to GGSN only.
In-progress calls @ BCMCS CONNECTED state	The total number of BCMCS sessions currently connected.
In-progress calls @ MBMS UE CONNECTED state	The total number of MBMS sessions currently in UE connected state.
In-progress calls @ MBMS BEARER CONNECTED state	The total number of MBMS sessions currently in bearer connected state.
In-progress calls @ IPSG CONNECTED state	The total number of IPSG sessions currently connected.
In-progress calls @ ASNPC CONNECTED state	Indicates the number of ASN Paging Controller calls that are currently connected.
In-progress calls @ CSCF-REGISTERING state	Total number of CSCF sessions which are in registration processing state.
In-progress calls @ CSCF-REGISTERED state	Total number of cscf sessions which are in registered state.
In-progress calls @ CSCF-CALL-ARRIVED state	Total number of CSCF sessions which are processing the newly arrived CSCF calls (i.e., processing initial Invite, waiting for provisional response, waiting for final response, etc.).
In-progress calls @ CSCF-CALL-CONNECTING state	Total number of CSCF sessions which are in call connecting state (waiting for ACK).

Field	Description
In-progress calls @ CSCF-CALL-CONNECTED state	Total number of CSCF sessions which are in call connected state.
In-progress calls @ CSCF-CALL-DISCONNECTING state	Total number of CSCF sessions which are in call disconnecting state (i.e., processing BYE , waiting for BYE response, etc.).
In-progress calls @ MME ATTACHED state	Indicates the number of MME subscriber session currently attached.
In-progress calls @ DISCONNECTING state	The total number of sessions that are in the process of disconnecting.

show session recovery status verbose

Table 378. show session recovery status verbose Output Descriptions

Field	Description
Last Status Update	The duration from the last time the Resource Manager did a health check on the session managers. This is informational info only, and does not reflect the last time a subscriber was checkpointed.
cpu	This indicates the card and slot number of the CPU listed.
state	Indicates the state of the specified CPU. This is either Active or Standby.
sessmgr	This lists the number of Session Managers in the active and standby state on the specified CPU.
aaamgr	Indicates the number of AAA managers in the active and standby state on the specified CPU.
demux active	Indicates the number of demux managers on the CPU.
status	This indicates the session recovery state for the specified CPU. This can be one of the following values: • Good (Demux) • Demux With Non-Demux • Non-Demux With Demux • Pair on Processing Cards • SESSMGR Not Ready • Missing AAAMGR • No Standby • Good • SESSMGR Not Ready • Too Few Standby • Good • Unknown

show session subsystem facility a11mgr all



Important: These statistics are from the perspective of the Session Manager (SessMgr) and A11 Manager (A11Mgr) task itself (not from the perspective of subscribers).

Table 379. show session subsystem facility a11mgr Command Output Descriptions

Field	Description
A11Mgr	The A11 Manager task instance number. Since multiple A11 Manager tasks can be operating simultaneously in the system, each one is assigned an instance number.
Total calls arrived	Indicates the total number of sessions received by this A11 Manager instance for processing.
Total calls rejected	Indicates the total number of sessions that were rejected by this A11 Manager instance.
Total calls demultiplexed	Indicates the total number of sessions that were successfully setup by this by this A11 Manager instance.
Total dereg reply sent	Indicates the total number of sessions that were successfully de-registered, or disconnected, by this by this A11 Manager instance.
Current active calls	Indicates the total number of active sessions currently being facilitated by this A11 Manager instance.
Total activeservices	The total number of PDSN services that are currently facilitating subscriber sessions.

show session subsystem facility aaamgr all



Important: These statistics are from the perspective of the Session Manager (SessMgr) and AAA Manager (AAAMgr) task itself (not from the subscriber perspective).

Table 380. show session subsystem facility aaamgr all Command Output Descriptions

Field	Description
AAA Manager	The AAA Manager task instance number. Since multiple AAA Manager tasks can be operating simultaneously in the system, each one is assigned an instance number.
Total aaa requests	The total number of AAA requests received by this AAAMgr instance for processing.
Current aaa requests	The number of AAA requests that this AAAMgr instance is currently processing.
Total aaa auth requests	The total number of AAA authentication requests that were received by this AAAMgr instance.
Current aaa auth requests	The number of AAA authentication requests that this AAAMgr instance is currently processing.
Total aaa auth probes	The total number of Authorization Probes that this AAAMgr instance has initiated.
Current aaa auth probes	The number of Authorization Probe requests that this AAAMgr instance is currently processing.
Total aaa auth keepalive	The total number of AAA authentication keepalive requests that were sent by this AAAMgr instance.
Current aaa auth keepalive	The number of AAA authentication keepalive requests that this AAAMgr instance is currently processing.
Total aaa acct requests	The total number of AAA accounting requests that were received by this AAAMgr instance.
Current aaa acct requests	The number of AAA accounting requests that this AAAMgr instance is currently processing.
Total aaa acct keepalive	The total number of AAA accounting keepalive requests that were sent by this AAAMgr instance.
Current aaa acct keepalive	The number of AAA accounting keepalive requests that this AAAMgr instance is currently processing.
Total aaa auth success	The total number of successful AAA authentications facilitated by this AAAMgr instance.
Total aaa no-auth null-username	The total number of AAA authentication requests dropped because of a null user name, or because there is no RADIUS null-username configured.
Total aaa auth failure	The total number of failed AAA authentications facilitated by this AAAMgr instance.
Total aaa auth purged	The total number of AAA authentication requests received by this AAAMgr instance that failed to get a response from the AAA server.

Field	Description
Total aaa auth cancelled	The total number of canceled AAA authentication requests facilitated by this AAAMgr instance.
Total auth keepalive success	The total number of successful authentication keepalives facilitated by this AAAMgr instance.
Total auth keepalive failure	The total number of failed authentication keepalives facilitated by this AAAMgr instance.
Total auth keepalive purged	The total number of authentication keepalive requests received by this AAAMgr instance that failed to get a response from the AAA server.
Total aaa auth DMU challenged	The total number of AAA authentication requests that were challenged for Dynamic Mobile Keying update.
aaa request (used/max)	The total number of AAA requests used and the maximum allowed for this AAAMgr instance.
Total Diameter auth requests	The total number of AAA authentication requests of the type Diameter authentication protocol facilitated by this AAAMgr instance.
Current Diameter auth requests	The number of AAA authentication requests of the type Diameter authentication protocol currently being processed by this AAAMgr instance.
Total Diameter auth requests retried	The total number of AAA authentication requests of the type Diameter authentication protocol that this AAAMgr instance retried. Retries occur when the AAAMgr instance does not receive a response from the AAA server to an initial request. The AAAMgr instance retries a request triggered by a timeout value configured under the AAA group.
Total Diameter auth requests dropped	The total number of AAA authentication requests of the type Diameter authentication protocol dropped by this AAAMgr instance due to the AAA server being unavailable or the system being out of memory.
Total radius auth requests	The total number of RADIUS authentication requests received by this AAAMgr instance.
Current radius auth requests	The number of RADIUS authentication requests currently being processed by this AAAMgr instance.
Total radius auth requests retried	The total number of RADIUS authentication requests processed by this AAAMgr instance that were retried.
Total radius auth responses dropped	The total number of RADIUS authentication responses dropped by the AAAMgr instance.
Total local auth requests	The total number of authentication requests received by this AAAMgr instance for locally configured subscribes.
Current local auth requests	The number of authentication requests currently being processed by this AAAMgr instance for locally configured subscribes.
Total pseudo auth requests	The total number of AAA requests for user profiles received by this AAAMgr instance.
Current pseudo auth requests	The number of current pending AAA requests for user profiles in this AAAMgr instance.
Total null-username auth requests (rejected)	The total number of AAA requests for un-attempted user profiles received by this AAAMgr instance.

Field	Description
Total aaa acct completed	The total number of AAA accounting requests received by this AAAMgr instance that were delivered successfully to the AAA server.
Total aaa acct purged	The total number of AAA accounting requests received by this AAAMgr instance that had to be purged because the storage limit of pending accounting requests had been exceeded.
Total acct keepalive success	The total number of successful accounting keepalives facilitated by this AAAMgr instance.
Total acct keepalive timeout	The total number of failed accounting keepalives facilitated by this AAAMgr instance.
Total acct keepalive purged	The total number of accounting keepalive requests received by this AAAMgr instance that failed to get a response from the AAA server.
Total aaa acct cancelled	The total number of AAA accounting requests received by this AAAMgr instance that were cancelled.
Total Diameter acct requests	The total number of AAA accounting requests of the type Diameter accounting protocol facilitated by this AAAMgr instance. This includes active and deleted requests.
Current Diameter acct requests	The number of AAA accounting requests of the type Diameter accounting protocol currently being processed by this AAAMgr instance.
Total Diameter acct requests retried	The total number of AAA accounting requests of the type Diameter accounting protocol that this AAAMgr instance retried. Retries occur when the AAAMgr instance does not receive a response from the AAA server to an initial request. The AAAMgr instance retries a request triggered by a timeout value configured under the AAA group.
Total diameter acct requests dropped	The total number of dropped AAA accounting requests of the type Diameter accounting protocol.
Total diameter acct responses dropped	The total number of dropped AAA accounting responses of the type Diameter accounting protocol.
Total diameter acct cancelled	The total number of cancelled AAA accounting requests of the type Diameter accounting protocol.
Total diameter acct purged	The total number of purged AAA accounting requests of the type Diameter accounting protocol.
Total radius acct requests	The total number of AAA accounting requests received by this AAAMgr instance for which the RADIUS protocol was used to deliver the accounting message to the AAA server.
Current radius acct requests	The number of AAA accounting requests currently being processed by this AAAMgr instance for which the RADIUS protocol is being used to deliver the accounting message to the AAA server.
Total radius acct cancelled	The total number of cancelled RADIUS accounting requests received by this AAAMgr instance.
Total radius acct purged	The total number of RADIUS accounting requests received by this AAAMgr instance that had to be purged because the storage limit of pending accounting requests had been exceeded.
Total radius acct requests retried	The total number of AAA accounting requests received by this AAAMgr instance for which the RADIUS protocol was used to deliver the accounting message to the AAA server that were retried.
Total radius acct responses dropped	The total number of RADIUS accounting responses dropped by the AAAMgr instance.

Field	Description
Total radius sec acct requests	The total number of AAA secondary accounting requests received by this AAAMgr instance for which the RADIUS protocol was used to deliver the accounting message to the AAA server.
Current radius sec acct requests	The number of AAA secondary accounting requests currently being processed by this AAAMgr instance for which the RADIUS protocol is being used to deliver the accounting message to the AAA server.
Total radius sec acct cancelled	The total number of cancelled RADIUS secondary accounting requests received by this AAAMgr instance.
Total radius sec acct purged	The total number of RADIUS secondary accounting requests received by this AAAMgr instance that had to be purged because the storage limit of pending accounting requests had been exceeded.
Total radius sec acct requests retried	The total number of AAA secondary accounting requests received by this AAAMgr instance for which the RADIUS protocol was used to deliver the accounting message to the AAA server that were retried.
Total gtpa acct requests	The total number of AAA accounting requests received by this AAAMgr instance for which the GTPA protocol was used to deliver the accounting message to the Charging Gateway Function (CGF).
Current gtpa acct requests	The current number of AAA accounting requests being processed by this AAAMgr instance for which the GTPA protocol is being used to deliver the accounting message to the Charging Gateway Function (CGF).
Total gtpa acct cancelled	The total number of accounting requests that were cancelled.
Total gtpa acct purged	The total number of accounting requests that were purged.
Total gtpa sec acct requests	The total number of secondary G-CDR requests being processed by this AAAMgr instance for which the GTPA protocol is being used to deliver the accounting message to the Charging Gateway Function (CGF). It counts total secondary G-CDRs generated by this AAAMgr instance.
Total gtpa sec acct purged	The total number of secondary G-CDR requests being processed and purged by this AAAMgr instance for which the GTPA protocol is being used to deliver the accounting message to the Charging Gateway Function (CGF). It counts total secondary G-CDRs purged by this AAAMgr instance.
Total null acct requests	The total number of AAA accounting requests received by this AAAMgr instance that were not required to be delivered to a AAA server.
Current null acct requests	The current number of AAA accounting requests being processed by this AAAMgr instance that are not required to be delivered to a AAA server.
Total aaa acct sessions	The total number of AAA accounting sessions facilitated by this AAAMgr instance.
Current aaa acct sessions	The number of AAA accounting sessions currently being facilitated by this AAAMgr instance.
Total aaa acct archived	The total number of AAA accounting requests received by this AAAMgr instance that initially failed to be delivered to a AAA server, and was subsequently archived for later transmission.
Current aaa acct archived	The current number of AAA accounting requests being processed by this AAAMgr instance that initially failed to be delivered to a AAA server and is currently archived for later transmission.
Current recovery archives	The number of AAA state records being maintained within the AAAMgr. They are used to generate accounting stops when a session manager fails or to recover the call in the Session Manager.
Current valid recovery records	The number of valid call recovery records that exist for current sessions.

Field	Description
Total aaa sockets opened	The total number of communication sockets opened by the AAAMgr instance for the purposes of communication with AAA servers.
Current aaa sockets open	The current number of communication sockets open by the AAAMgr instance for communication with AAA servers.
Total aaa requests pend socket open	The total number of AAA requests received by this AAAMgr instance that had to wait in queue while a socket to the AAA server was being opened.
Current aaa requests pend socket open	The number of AAA requests received by this AAAMgr instance that are currently waiting in queue while a socket to the AAA server is being opened.
Total radius requests pend server max-outstanding	The total number of RADIUS requests received by this AAAMgr instance that had to wait in queue because the limit of the number of outstanding RADIUS messages had been reached.
Current radius requests pend server max-outstanding	The number of RADIUS requests received by this AAAMgr instance that are currently waiting in queue because the limit of the number of outstanding RADIUS messages has been reached.
Total aaa radius coa requests	The total number of RADIUS Change Authorization Requests received from the RADIUS server.
Total aaa radius dm requests	The total number of RADIUS Disconnect Requests Received from the RADIUS server.
Total aaa radius coa acks	The total number of RADIUS Change Authorization Acknowledgement sent to the RADIUS server.
Total aaa radius dm acks	The total number of RADIUS Disconnect Acknowledgments sent to the RADIUS Server.
Total aaa radius coa naks	The total number of RADIUS Change Authorization Negative Acknowledgement sent to the RADIUS server.
Total aaa radius dm naks	The total number of RADIUS Disconnect Negative Acknowledgments sent to the RADIUS Server.
Total radius charg auth	The total number of authentication requests sent to the RADIUS charging server.
Total radius charg auth purg	The total number of RADIUS charging authentication requests purged.
Current radius charg auth	The total number of current authentication requests sent to the RADIUS charging server.
Total radius charg auth succ	The total number of successful authentication requests sent to the RADIUS charging server.
Total radius charg auth fail	The total number of access reject received from the RADIUS charging server.
Total radius charg auth cancel	The total number of accounting authorization request that were cancelled.
Total radius charg acct	The total number of accounting requests sent to the RADIUS charging server.

Field	Description
Current radius charg acct	The total number of current accounting requests sent to the RADIUS charging server
Total radius charg acct succ	The total number of accounting responses from the RADIUS charging server.
Total radius charg acct cancel	The total number of accounting requests that were cancelled.
Total gtpv charg	The total number of GTPV accounting requests sent to the server.
Current gtpv charg	The total number of current GTPV requests sent to the charging server.
Total gtpv charg success	The total number of successful GTPV accounting responses from the charging server.
Total gtpv charg failure	The total number of failed GTPV accounting requests from the charging server.
Total gtpv charg cancelled	The total number of cancelled GTPV accounting requests from the charging server.
Total gtpv charg purged	The total number of purged GTPV accounting requests.
Total radius charg acct purg	The total number of accounting requests purged.
Total gtpv sec charg	The total number of secondary eG-CDR charging requests being processed by this AAAMgr instance for which the GTPV protocol is being used to deliver the charging message to the Charging Gateway Function (CGF). It counts total secondary eG-CDRs generated by this AAAMgr instance.
Total gtpv sec charg purged	The total number of secondary eG-CDRs charging requests being processed and purged by this AAAMgr instance for which the GTPV protocol is being used to deliver the charging message to the Charging Gateway Function (CGF). It counts total secondary eG-CDRs purged by this AAAMgr instance
Total prepaid online requests	The total number of prepaid online requests.
Current prepaid online requests	The number of prepaid online requests that this AAAMgr instance is currently processing.
Total prepaid online success	The total number of prepaid online requests succeed.
Current prepaid online failure	The number of failed prepaid online requests that this AAAMgr instance is currently processing.
Total prepaid online retried	The total number of prepaid online requests retried.
Total prepaid online cancelled	The total number of prepaid online requests cancelled.
Current prepaid online purged	The total prepaid online cancelled.
Total aaamgr purged requests	The total number of purged AAAMgr requests.

■ show session subsystem facility aaamgr all

Field	Description
SGSN: Total mm records	Total number of Mobility Management (MM) records in database of this AAAMgr instance for SGSN service.
SGSN: Total pdp records	Total number of PDP context records in database of this AAAMgr instance for SGSN service.
SGSN: Total auth records	Total number of authentication records in database of this AAAMgr instance for SGSN service.
MME: Total extension records	Total number of extension records in database of this AAAMgr instance for MME service.
MME: Total apn records	Total number of APN records in database of this AAAMgr instance for MME service.
MME: Total apn extension records	Total number of extended APN records in database of this AAAMgr instance for MME service.
MME: Total auth records	Total number of authentication records in database of this AAAMgr instance for MME service.
MME: Total auth extension records	Total number of extended authentication records in database of this AAAMgr instance for MME service.
Current active subscriber traces	Total number of subscribers currently enabled with Subscriber Tracing function in database of this AAAMgr instance for MME service.

show session subsystem facility aaaproxy all



Important: These statistics are from the perspective of the Session manager (SessMgr) and AAA Proxy Manager (AAAProxyMgr) task itself (not from the perspective of subscribers).

Table 381. show session subsystem facility aaaproxy all Command Output Descriptions

Field	Description
Total gtpv requests	The total number of GTPv requests sent.
Current gtpv requests	The total number of outstanding GTPv requests waiting for response from CGF/storage server.
Total GCDRs	The total number of G-CDRs sent.
Current GCDRs	The total number of outstanding G-CDRs waiting for response from CGF/storage server.
Total G-MB-CDRs	The total number of G-MB-CDRs sent.
Current G-MB-CDRs	The total number of outstanding G-MB_CDRs waiting for response from CGF/storage server.
Total SCDRs	The total number of S-CDRs sent.
Current SCDRs	The total number of outstanding S-CDRs waiting for response from CGF/storage server.
Total MCDRs	The total number of M-CDRs sent.
Current MCDRs	The total number of outstanding M-CDRs waiting for response from CGF/storage server.
Total S-SMO-CDRs	The total number of S-SMO-CDRs sent.
Current S-SMO-CDRs	The total number of outstanding S-SMO-CDRs waiting for response from CGF/storage server.
Total S-SMT-CDRs	The total number of S-SMT-CDRs sent.
Current S-SMT-CDRs	The total number of outstanding S-SMT-CDRs waiting for response from CGF/storage server.
Total SMBMSCDRs	The total number of outstanding SMBMS CDRs waiting for response from CGF/storage server.
Total SGW-CDRs	The total number of outstanding S-GW CDRs waiting for response from CGF/storage server.
Total WLAN-CDRs	The total number of outstanding WLANGW CDRs waiting for response from CGF/storage server.
Total sockets opened	The total number of sockets opened.
Current sockets opened	The total number of sockets waiting to open.
Total files closed	The total number of files that have been already closed.
Current Open files	The number of files that are currently open and still in use.

show session subsystem facility asngwmgr all



Important: These statistics are from the perspective of the Session manager (SessMgr) and ASNGW Manager (ASNGWMgr) task itself (not from the perspective of subscribers).

Table 382. show session subsystem facility asngwmgr all Command Output Descriptions

Field	Description
ASNGW Managers	Total number of active ASN GW Managers.
Total active services	Total number of active ASN GW services.
Anchor Session	Specifies the subsystem statistics for ASN GW service sessions in anchored mode.
Non-Anchor Session	Specifies the subsystem statistics for ASN GW service sessions in non-anchored mode.
Total calls arrived	Indicates the total number of sessions received by this ASN Gateway Manager instance for processing.
Total calls rejected	Indicates the total number of sessions that were rejected by this ASN Gateway Manager instance.
Total calls demultiplexed	Indicates the total number of sessions that were successfully setup by this by this ASN Gateway Manager instance.
Total dereg reply sent	Indicates the total number of sessions that were successfully de-registered, or disconnected, by this ASN Gateway Manager instance.
Total control pkts relayed	Indicates the total number of R6 control packets relayed via demux manager.
Current active calls	Indicates the total number of active sessions currently being facilitated by this ASN Gateway Manager instance.
Total active services	The total number of ASN Gateway services that are currently facilitating subscriber sessions.

show session subsystem facility asnpcmgr all



Important: These statistics are from the perspective of the Session Manager (SessMgr) and ASN-PC Manager (ASNPCMgr) task itself (not from the subscriber perspective).

Table 383. show session subsystem facility asngwmgr all Command Output Descriptions

Field	Description
ASNPC Managers	Total number of active ASN PC Manager instances.
Total activeservices	Total number of active ASN PC services.
Total calls arrived	Indicates the total number of sessions received by this ASN PC Manager instance for processing.
Total calls rejected	Indicates the total number of sessions that were rejected by this ASN PC Manager instance.
Total calls demultiplexed	Indicates the total number of sessions that were successfully setup by this by this ASN PC Manager instance.
Total calls released	Indicates the total number of sessions that were successfully de-registered, or disconnected, by this ASN PC Manager instance.
Total control pkts relayed	Indicates the total number of R6 control packets relayed via demux manager.
Current active calls	Indicates the total number of active sessions currently being facilitated by this ASN Gateway Manager instance.
context name	Indicates the name of the context where ASN PC service is configured.

show session subsystem facility famgr all



Important: These statistics are from the perspective of the Session Manager (SessMgr) and FA Manager (FAMgr) task itself (not from the subscriber perspective).

Table 384. show session subsystem facility famgr Command Output Descriptions

Field	Description
FAMgr	The FA Manager task instance number. Since multiple FA Manager tasks can be operating simultaneously in the system, each one is assigned an instance number.
Total calls arrived	Indicates the total number of sessions received by this FA Manager instance for processing.
Total calls rejected	Indicates the total number of sessions that were rejected by this FA Manager instance.
Total calls demultiplexed	Indicates the total number of sessions that were successfully setup by this by this FA Manager instance.
Total deregreply sent	Indicates the total number of sessions that were successfully de-registered, or disconnected, by this by this FA Manager instance.
Current active calls	Indicates the total number of active sessions currently being facilitated by this FA Manager instance.
Total active services	The total number of FA services that are currently facilitating subscriber sessions.

show session subsystem facility gtpcmgr all

 **Important:** These statistics are from the perspective of the Session Manager (SessMgr) and GTPC Manager (GTPCMgr) task itself (not from the subscriber perspective).

 **Important:** This command is not supported release 14.0 onwards. Look for new command “`show session subsystem facility egtpinmgr all`” instead.

Table 385. show session subsystem facility gtpcmgr Command Output Descriptions

Field	Description
GTPCMgr	The GTPC Manager task instance number. Since multiple GTPC Manager tasks can be operating simultaneously in the system, each one is assigned an instance number.
Total calls arrived	Indicates the total number of sessions received by this GTPC Manager instance for processing.
Total calls rejected	Indicates the total number of sessions that were rejected by this GTPC Manager instance.
Total calls demultiplexed	Indicates the total number of sessions that were successfully setup by this by this GTPC Manager instance.
Total SGSNs	Indicates the total number of SGSNs available for facilitating subscriber sessions.
Total Active SGSNs	The total number of SGSNs that are currently facilitating subscriber sessions.
Current active calls	Indicates the total number of active sessions currently being facilitated by this GTPC Manager instance.
Total active services	The total number of GTPC services that are currently facilitating subscriber sessions.

show session subsystem facility hamgr all



Important: These statistics are from the perspective of the Session Manager (SessMgr) and HA Manager (HAMgr) task itself (not from the subscriber perspective).

Table 386. show session subsystem facility hamgr all Command Output Descriptions

Field	Description
HAMgr	The HA Manager task instance number. Since multiple HA Manager tasks can be operating simultaneously in the system, each one is assigned an instance number.
Total calls arrived	Indicates the total number of sessions received by this HA Manager instance for processing.
Total calls rejected	Indicates the total number of sessions that were rejected by this HA Manager instance.
Total calls demultiplexed	Indicates the total number of sessions that were successfully setup by this by this HA Manager instance.
Total deregreply sent	Indicates the total number of sessions that were successfully de-registered, or disconnected, by this by this HA Manager instance.
Current active calls	Indicates the total number of active sessions currently being facilitated by this HA Manager instance.
Total active services	The total number of HA services that are currently facilitating subscriber sessions.

show session subsystem facility mmedemux



Important: These statistics are from the perspective of the MME Demux Manager (MMEDemuxr) task itself (not from the subscriber perspective).

Table 387. show session subsystem facility mmedemux Output Descriptions

Field	Description
MME Demux Managers	The total number of MME managers running on a chassis.
Total number of packets received	The total number of packets received and processed for EPS session by the MME Demux manager.
Total number of packets received (IPSec)	The total number of encrypted packets received and processed for EPS session by the MME Demux manager.
Total number of packets dropped (Assurance Violation)	The total number of packets received but dropped due to not being encrypted.
Total number of octets received	The total number of packets received and processed for EPS session by the MME Demux manager.
Total number of octets received (IPSec)	The total number of encrypted octets received and processed for EPS session by the MME Demux manager.
Total number of octets dropped (Assurance Violation)	The total number of octets received but dropped due to not being encrypted.
Total Services	The total number of MME services managed by the MME Demux Manager.
Total Services (IPSec)	The total number of IPSec-enabled MME services managed by the MME Demux Manager.
Enodeb Associations	The total number of eNodeBs connected/associated with MME services managed by the MME Demux Manager.
Enodeb Associations (IPSec)	The total number of IPSec-enabled eNodeBs connected/associated with MME services managed by the MME Demux Manager.

show session subsystem facility mmemgr all



Important: These statistics are from the perspective of the MME Manager (MMEMgr) task itself (not from the subscriber perspective).

Table 388. show session subsystem facility mmemgr all Output Descriptions

Field	Description
MME Managers	Indicates the total number of MME managers running on a chassis.
SCTP Statistics	This group displays the statistics captured over the SCTP interface and processed by this MME manager.
Transmitted SCTP Data	This sub-group displays the statistics of the total data processed and transmitted over SCTP interface by this MME manager.
Init Chunks	Indicates the total SCTP packets with INIT transmitted over SCTP interface by this MME manager.
Init Ack Chunks	Indicates the total SCTP packets with INIT-ACK transmitted over SCTP interface by this MME manager.
Shutdown Chunks	Indicates the total SCTP packets with SHUTDOWN transmitted over SCTP interface by this MME manager.
Shutdown Ack Chunks	Indicates the total SCTP packets with SHUTDOWN-ACK transmitted over SCTP interface by this MME manager.
Cookie Chunks	Indicates the total SCTP packets with COOKIE transmitted over SCTP interface by this MME manager.
Cookie Ack Chunks	Indicates the total SCTP packets with COOKIE-ACK transmitted over SCTP interface by this MME manager.
Data Chunks	Indicates the total SCTP packets with DATA transmitted over SCTP interface by this MME manager.
Data Ack Chunks	Indicates the total SCTP packets with DATA-ACK transmitted over SCTP interface by this MME manager.
Shutdown Complete Chunks	Indicates the total SCTP packets with SHUTDOWN-COMPLETE transmitted over SCTP interface by this MME manager.
Heartbeat Chunks	Indicates the total SCTP packets with HEARTBEAT transmitted over SCTP interface by this MME manager.
HeartBeat Ack Chunks	Indicates the total SCTP packets with HEARTBEAT-ACK transmitted over SCTP interface by this MME manager.
Abort Chunks	Indicates the total SCTP packets with ABORT transmitted over SCTP interface by this MME manager.
Error Chunks	Indicates the total SCTP packets with ERROR transmitted over SCTP interface by this MME manager.

Field	Description
Received Sctp Data	This sub-group displays the statistics of the total data received over Sctp interface and processed by this MME manager.
Init Chunks	Indicates the total Sctp packets with INIT received over Sctp interface by this MME manager.
Init Ack Chunks	Indicates the total Sctp packets with INIT-ACK received over Sctp interface by this MME manager.
Shutdown Chunks	Indicates the total Sctp packets with SHUTDOWN received over Sctp interface by this MME manager.
Shutdown Ack Chunks	Indicates the total Sctp packets with SHUTDOWN-ACK received over Sctp interface by this MME manager.
Cookie Chunks	Indicates the total Sctp packets with COOKIE received over Sctp interface by this MME manager.
Cookie Ack Chunks	Indicates the total Sctp packets with COOKIE-ACK received over Sctp interface by this MME manager.
Data Chunks	Indicates the total Sctp packets with DATA received over Sctp interface by this MME manager.
Data Ack Chunks	Indicates the total Sctp packets with DATA-ACK received over Sctp interface by this MME manager.
Shutdown Complete Chunks	Indicates the total Sctp packets with SHUTDOWN-COMPLETE received over Sctp interface by this MME manager.
Heartbeat Chunks	Indicates the total Sctp packets with HEARTBEAT received over Sctp interface by this MME manager.
HeartBeat Ack Chunks	Indicates the total Sctp packets with HEARTBEAT-ACK received over Sctp interface by this MME manager.
Abort Chunks	Indicates the total Sctp packets with ABORT received over Sctp interface by this MME manager.
Error Chunks	Indicates the total Sctp packets with ERROR received over Sctp interface by this MME manager.
Retransmitted Sctp Data	This sub-group displays the statistics of the total data processed and retransmitted over Sctp interface by this MME manager.
Init Chunks	Indicates the total Sctp packets with INIT retransmitted over Sctp interface by this MME manager.
Shutdown Chunks	Indicates the total Sctp packets with SHUTDOWN retransmitted over Sctp interface by this MME manager.
Shutdown Ack Chunks	Indicates the total Sctp packets with SHUTDOWN-ACK retransmitted over Sctp interface by this MME manager.
Cookie Chunks	Indicates the total Sctp packets with COOKIE retransmitted over Sctp interface by this MME manager.
Data Chunks	Indicates the total Sctp packets with DATA transmitted over Sctp interface by this MME manager.
Total Bytes Sent To Lower Layer	Indicates the total bytes processed and sent to lower layer over Sctp interface by this MME manager.
Total Bytes Received From Lower Layer	Indicates the total bytes received from lower layer over Sctp interface by this MME manager for processing.

Field	Description
Total Packets Sent To Lower Layer	Indicates the total packets processed and sent to lower layer over SCTP interface by this MME manager.
Total Packets Received From Lower Layer	Indicates the total packets received from lower layer over SCTP interface by this MME manager for processing.
S1 AP Statistics	This group displays the statistics captured over S1 -AP interface and processed by this MME manager received or transmitted from/to eNodeB.
Transmitted S1 AP Data	This sub-group displays the statistics of the total data processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
S1 Setup Response	Indicates the total number of S1 SETUP RESPONSE messages for S1 setup procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
S1 Setup Failure	Indicates the total number of S1 SETUP FAILURE messages for S1 setup procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
Reset	Indicates the total number of S1 RESET messages for S1 reset procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
Reset Acknowledge	Indicates the total number of S1 RESET-ACK messages for S1 reset procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
Overload Start	Indicates the total number of OVERLOAD-START messages for S1 overload start procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
Overload Stop	Indicates the total number of OVERLOAD-START messages for S1 overload start procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
MME Dir Information Transfer	Indicates the total number of MME DIRECT INFORMATION TRANSFER messages for MME Direct Information Transfer procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
Paging	Indicates the total number of PAGING messages for paging procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
EnodeB Configuration Update Acknowledge	Indicates the total number of ENB CONFIGURATION UPDATE ACK messages for eNB Configuration Update procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
EnodeB Configuration Update Failure	Indicates the total number of ENB CONFIGURATION UPDATE FAILURE messages for eNB Configuration Update procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
S1 AP Encode Failure	Indicates the total number of failure occurred during S1 AP encode procedure and S1 AP ENCODE FAILURE messages processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
Received S1 AP Data	This sub-group displays the statistics of the total data received over S1 -AP interface by this MME manager from eNodeB.
S1 Setup Request	Indicates the total number of S1 SETUP REQUEST messages for S1 setup procedure received over S1 -AP interface by this MME manager from eNodeB.
Reset	Indicates the total number of S1 RESET messages for S1 reset procedure received over S1 -AP interface by this MME manager from eNodeB.

Field	Description
Reset Acknowledge	Indicates the total number of S1 RESET-ACK messages for S1 reset procedure received over S1 -AP interface by this MME manager from eNodeB.
EnodeB Dir Information Transfer	Indicates the total number of ENB DIRECT INFORMATION TRANSFER messages for eNB Direct Information Transfer procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
EnodeB Configuration Update	Indicates the total number of ENB CONFIGURATION UPDATE messages for eNB Configuration Update procedure processed and transmitted over S1 -AP interface by this MME manager to eNodeB.
S1 AP Decode Failure	Indicates the total number of failure occurred during S1 AP decoding procedure by eNodeB and S1 AP DECODE FAILURE messages received over S1 -AP interface by this MME manager from eNodeB.
S1 AP Unexpected Event	Indicates the total number of failure occurred due to unexpected events during S1 AP procedure at eNodeB and S1 AP UNEXPECTED EVENT messages received over S1 -AP interface by this MME manager from eNodeB.
Total Services	Indicates the total number of MME services managed by this MME Manager.
Total Services (IPSec)	Indicates the total number of IPSec-enabled MME services managed by this MME Manager.
Enodeb Associations	Indicates the total number of eNodeBs connected/associated with MME services managed by this MME Manager.
Enodeb Associations (IPSec)	Indicates the total number of IPSec-enabled eNodeBs connected/associated with MME services managed by this MME Manager.

show session subsystem facility sessmgr all



Important: These statistics are from the perspective of the Session Manager (SessMgr) task itself (not from the subscriber perspective).

Table 389. show session subsystem facility sessmgr all Output Descriptions

Field	Description
SessMgr	Displays the Session Manager task instance number. Since multiple Session Manager tasks can be operating simultaneously in the system, each one is assigned an instance number.
Total calls arrived	The total number of calls for which registration requests were received by this Session Manager instance.
Total calls rejected	The total number of calls that were rejected by this Session Manager instance.
Total calls connected	The total number of calls that are connected (including active, dormant, being set up, and being disconnected) by this Session Manager instance.
Total calls failed	The total number of calls processed by this Session Manager instance which have failed.
Total calls disconnected	The total number of calls that were disconnected by this Session Manager instance.
Total handoffs	The total number of calls that are handed off by this Session Manager instance.
Total renewals	The total number of call that were reprocessed by this Session Manager instance.
Total active-to-idle transitions	The total number of call sessions passed through active mode to idle mode.
Total idle-to-active transitions	The total number of call sessions passed through idle mode to active mode.
Total auth successes	The total number of successful authentications for calls being processed by this Session Manager instance.
Total auth failure	The total number of failed authentications for calls being processed by this Session Manager instance.
Current aaa active sessions	The total number of calls being processed by this Session Manager instance for which there are active AAA authentication and/or accounting sessions.
Current aaa deleting sessions	The total number of calls being processed by this Session Manager instance for which the AAA accounting is being terminated.
Current aaa acct pending	The total number of calls being processed by this Session Manager instance for which there are pending AAA authentication and/or accounting sessions.
aaa acct items (used/max)	The total number of AAA accounting items used and the maximum allowed by this Session Manager instance.
aaa buffer (used in MB/max in MB)	The AAA buffer space used and the maximum allowed in megabytes for this Session Manager instance.
Total aaa cancel auth	The total number of canceled AAA authentication requests for this Session Manager instance.

Field	Description
Total aaa acct purged	The total number of AAA accounting requests received by this Session Manager instance that had to be purged because the storage limit of pending accounting requests had been exceeded.
Total radius acct purged	The total number of RADIUS accounting requests received by this Session Manager instance that had to be purged because the storage limit of pending accounting requests had been exceeded.
Total LCP up	The total number of calls being processed by this Session Manager instance that have completed the Link Control Protocol (LCP) phase of the registration process.
Total IPCP up	The total number of calls being processed by this Session Manager instance that have completed the Internet Protocol Control Protocol (IPCP) phase of the registration process.
Total IPv6CP up	The total number of calls being processed by this Session Manager instance that have completed the Internet Protocol version 6 (IPv6) phase of the registration process.
Total source violation	The total number of source violations experienced for all calls being processed by this Session Manager instance.
Total keepalive failure	The total number of keep-alive failures experienced for all calls being processed by this Session Manager instance.
Empty fwd pkt sessions	The total number of calls that were processed by this session manager instance for which there were no data packets being sent to the subscriber.
Empty rev pkt sessions	The total number of calls that were processed by this session manager instance for which there were no data packets being received from the subscriber.
Total 3gpp2 prepaid sess	The total number of 3gpp2 prepaid sessions on the system.
Current 3gpp2 prepaid sess	The current number of active 3gpp2 prepaid sessions on the system.
Total 3gpp2 online auth requests	The total number of 3gpp2 sessions requesting authentication on the system.
Total 3gpp2 online auth success	The total number of authenticated 3gpp2 active sessions on the system.
Total 3gpp2 online auth failures	The total number of 3gpp2 sessions that had authentication failures.
Total 3gpp2 online prepaid errors	The total number of prepaid 3gpp2 sessions that incurred errors.
Total 3gpp2 prepaid initial auth errors	The total number of prepaid initial 3gpp2 sessions that had authentication errors.
Total Rfc3261 subscribers	Total number of subscribers registered in CSCF Rfc3261 service.
Total Proxy Cscf subscribers	Total number of subscribers registered in Proxy-CSCF service.
Total Serving Cscf subscribers	Total number of subscribers registered in Serving-CSCF service.
Total Proxy-Serving cscf subscribers	Total number of subscribers registered in Collapsed Proxy-Serving-CSCF service.
Total voice-push sessions	The total number of voice-push sessions.
Current voice-push sessions	The current number of active voice-push sessions.
Total voice-push-filt sessions	The total number of voice-push-filt sessions.
Current voice-push-filt sessions	The current number of voice-push-filt sessions.
Total non-voice-push sessions	The total number of non-voice-push session.

Field	Description
Current non-voice-push sessions	The current number of non-voice-push sessions
Total undetermined sessions	The total number of undetermined sessions.
Current undetermined sessions	The current number of undetermined sessions.
Intra-ASNGW HO attempted	The total number of inter-BS (Intra-ASN GW) handovers attempted by system.
Intra-ASNGW HO succeeded	The total number of inter-BS (Intra-ASN GW) handover attempts succeeded.
Inter-ASNGW HO attempted	The total number of inter-ASN GW handovers attempted by system.
Inter-ASNGW HO succeeded	The total number of inter-ASN GW handover attempts succeeded.
ASNPC IM Entry attempted	The total number of idle mode entry attempted by Paging Controller.
ASNPC IM Entry Succeeded	The total number of idle mode entry by Paging Controller succeeded.
ASNPC IM Exit attempted	The total number of idle mode exit attempted by Paging Controller.
ASNPC IM Exit Succeeded	The total number of idle mode exit by Paging Controller succeeded.
ASNPC LU attempted	The total number of location updates attempted by Paging Controller.
ASNPC LU Succeeded	The total number of location updates by Paging Controller succeeded.
ASNPC Paging Triggered	The total number of pagings triggered by Paging Controller.
ASN Ctrl packets received	The total number of control packets received for ASN GW service session.
ASN Ctrl packets runt received	The total number of control packets with run-time error discarded for ASN GW service session.
ASN Ctrl packets csum received	The total number of control packets with checksum error discarded for ASN GW service session.
ASN Ctrl packets no-flow discarded	The total number of control packets (without any flow) discarded for ASN GW service session.
ASNGW data pkts stored (during paging)	The total number of data packets stored during paging.
ASNGW data pkts flushed (during paging)	The total number of data packets flushed during paging.
CRP-RP handoff attempted	The total number of Closed RP to RP handoffs that were attempted.
CRP-RP handoff succeeded	The total number of Closed RP to RP handoffs that succeeded.
RP-CRP handoff attempted	The total number of RP to Closed RP handoffs that were attempted.
RP-CRP handoff succeeded	The total number of RP to Closed RP handoffs that succeeded.
Current active subscriber traces	Total number of subscribers currently enabled with Subscriber Tracing function in database of this SessMgr instance for MME service.
Data statistics	This table categorizes the number of Receive and Transmit packets into packet size ranges. These statistics are totals for all calls being processed by this Session Manager instance.
In-Progress Call Duration Statistics	This table categorizes the total number of calls being processed by this Session Manager according to various time durations ranging from less than (<) 1 minute to greater than (>) 24 hours.

Field	Description
Setup Time Statistics	This table categorizes the amount of time it took to set up calls according to various time durations ranging from less than (<) 100 ms to greater than (>) 18 seconds.
Total SGSN Fast Path statistics update	Total number of updates for statistical information from NPU in fast path support.
Total SGSN Fast Path out-of-order statistics updates	Total number of updates for out of order packet statistics from NPU in fast path support.
Total SGSN Fast Path statistics updates lost	Total number of packets lost for statistical updates from NPU in fast path support.
Total SGSN Fast Path packets lost	Total number of lost packets of all types from NPU in fast path support.
Total SGSN Fast Path bytes lost	Total number of lost bytes from NPU in fast path support.
Total SGSN Fast Path packets received	Total number of all type of packets received from NPU in fast path support.
Total SGSN Fast Path bytes received	Total number of all type of bytes received from NPU in fast path support.
In-progress calls	The number of calls that are currently in progress (active, dormant, being set up, or being disconnected) and being processed by either the system (if no keywords were used), a specific PDSN service (if the pdsn-service keyword was used), or a specific PCF (if the pcf keyword was used).
In-progress active calls	The total number of active sessions being processed by this Session Manager instance.
In-progress dormant calls	The total number of dormant sessions being processed by this Session Manager instance.
In-progress always-on calls	The total number of always-on sessions being processed by this Session Manager instance.
In-progress calls @ MBMS UE AUTHORIZING state	The total number of MBMS sessions currently in UE authorization state.
In-progress calls @ MBMS BEARER AUTHORIZING state	The total number of MBMS sessions currently in bearer authorization state.
In-progress calls @ ARRIVED state	The total number of sessions being processed by this Session Manager instance that are at the onset of the registration process.
In-progress calls @ LCP-NEG state	The total number of sessions being processed by this Session Manager instance that are in the Link Control Protocol (LCP) negotiation phase of the registration process.
In-progress calls @ LCP-UP state	The total number of sessions being processed by this Session Manager instance that have just completed the Link Control Protocol (LCP) negotiation phase of the registration process.
In-progress calls @ AUTHENTICATING state	The total number of sessions being processed by this Session Manager instance that are in the process of being authenticated.
In-progress calls @ AUTHENTICATED state	The total number of sessions being processed by this Session Manager instance that have just completed the authentication phase of the registration process.
In-progress calls @ L2TP-LAC CONNECTING state	The number of calls that have an L2TP tunnel in the process of being brought up.
In-progress calls @ IPCP-UP state	The total number of sessions being processed by this Session Manager instance that have just completed the Internet Protocol Control Protocol (IPCP) phase of the registration process.

Field	Description
In-progress calls @ NON-ANCHOR CONNECTED state	The total number of WiMAX sessions being processed by this Session Manager instance that are currently being in connected state in non-anchor mode.
In-progress calls @ SIMPLE-IP CONNECTED state	The total number of Simple IP data sessions being processed by this Session Manager instance that are currently being supported.
In-progress calls @ MOBILE-IP CONNECTED state	The total number of Mobile IP data sessions being processed by this Session Manager instance that are currently being supported.
In-progress calls @ PROXY-MOBILE-IP CONNECTED state	The total number of Proxy Mobile IP data sessions being processed by this Session Manager instance that are currently being supported.
In-progress calls @ L2TP-LAC CONNECTED state	The number of calls that are passing data through an L2TP tunnel.
In-progress calls @ PDP-TYPE-IP CONNECTED state	The total number of PDP contexts of type IP that are currently connected. This field applies to GGSN only.
In-progress calls @ PDP-TYPE-PPP CONNECTED state	The total number of PDP contexts of type PPP that are currently connected. This field applies to GGSN only.
In-progress calls @ BCMCS CONNECTED state	The total number of BCMCS sessions currently in connected state.
In-progress calls @ MBMS UE CONNECTED state	The total number of MBMS sessions currently in UE connected state.
In-progress calls @ MBMS BEARER CONNECTED state	The total number of MBMS sessions currently in bearer connected state.
In-progress calls @ ASNPC CONNECTED state	The number of ASN Paging Controller calls that are currently connected.
In-progress calls @ DISCONNECTING state	The total number of sessions being processed by this Session Manager instance that are in the process of disconnecting.
In-progress calls @ CSCF-REGISTERING state	Total number of CSCF sessions which are in registration processing state.
In-progress calls @ CSCF-REGISTERED state	Total number of cscf sessions which are in registered state.
In-progress calls @ CSCF-CALL-ARRIVED state	Total number of CSCF sessions which are processing the newly arrived CSCF calls (i.e., processing initial Invite, waiting for provisional response, waiting for final response, etc.).
In-progress calls @ CSCF-CALL-CONNECTING state	Total number of CSCF sessions which are in call connecting state (waiting for ACK).
In-progress calls @ CSCF-CALL-CONNECTED state	Total number of CSCF sessions which are in call connected state.
In-progress calls @ CSCF-CALL-DISCONNECTING state	Total number of CSCF sessions which are in call disconnecting state (i.e., processing BYE, waiting for BYE response, etc.).
In-progress calls @ MME ATTACHED state	Indicates the number of MME subscriber session currently attached.
User Data statistics	This section indicates the Data octets and Data packets received and send by a user.
Data octets from User	The number of Data octets send from the user.

Field	Description
Data octets to User	The number of Data octets received by the user.
Data packets from User	The number of Data packets send from the user.
Data packets to User	The number of Data packets received by the user.

show session trace statistics

Table 390. show session trace statistics Command Output Descriptions

Field	Description
Network Element Status	Specifies if session traces are enabled for the listed network elements.
Number of current trace sessions	The total number of session traces currently active.
Total trace sessions activated	The total number of session traces activated.
Total number of trace session activation failures	The total number of session activation failures.
Total number of trace recording sessions triggered	The total number of trace recording sessions triggered
Total number of messages traced	The total number of messages traced for the activated session traces.
Number of messages dropped	
No memory	The total number of messages dropped due to a no memory condition.
No trace recording session	The total number of messages dropped due to a failure to receive the start trigger.
Interface not traced	The total number of messages dropped due to the messages being received on interfaces not part of the trace interface list.
Total number of file generated	The total number of session trace files generated.
Number of files deleted	
No space	The total number of files deleted due to a lack of space on the storage device.
Number of current TCE connections	The total number of trace collection entity connections currently configured.
Total number of TCE connections	The total number of trace collection entity connections configured.
Total number of files uploaded to all TCEs	The total number of files uploaded to all trace collection entities.

show session trace subscriber

The full command is as follows:

```
show session trace subscriber network-element <type> trace-ref <id>
```

Table 391. show session trace subscriber Command Output Descriptions

Field	Description
Trace reference	The trace reference ID for the trace displayed. The ID is the MCC (3 digits), followed by the MNC (3 digits), then the trace ID number (3 byte octet string).
Activation time	The date and time when the trace was initiated.
IMEI or IMSI	The subscriber identification. IMEI: The International Mobile Equipment Identification number of the subscriber's UE. IMSI: The International Mobile Subscriber Identification (IMSI) which is the 3-digit MCC (Mobile Country Code), 2 or 3-digit MNC (Mobile Network Code), and the MSIN (Mobile Subscriber Identification Number).
Actively Tracing	Specifies if the trace is currently active.
Trace Recording Session Reference	The current active trace recording session reference number.
Recording start time	The date and time when the session trace recording started.
Total number of trace recording sessions triggered	The total number of trace recording sessions initiated.
Total number of messages traced	The total number of messages traced for this trace reference.
Number of messages dropped	
No memory	The total number of messages dropped due to a no memory condition.
No trace recording session	The total number of messages dropped due to a failure to receive the start trigger.
Interface not traced	The total number of messages dropped due to the messages being received on interfaces not part of the trace interface list.
Total number of files created	The total number of trace recording files created.
Number of files deleted	
No space	The total number of files deleted due to a lack of space on the storage device.
Traced Interfaces	List of interfaces configured for the session trace.
Trace Triggers	Identifies the triggers used by this subscriber.

■ show session trace subscriber

Chapter 147

show sgs-service

This chapter describes the output of the `show sgs-service` command.

show sgs-service statistics all

Displays SGs service statistics for all SGs services configured on the system.

Table 392. show sgs-service statistics all Command Output Descriptions

Field	Description
SCTP Statistics	
Transmitted SCTP Data	
Init Chunks	The total number of initial chunks transmitted by this service.
Init Ack Chunks	The total number of initial ack chunks transmitted by this service.
Shutdown Chunks	The total number of shutdown chunks transmitted by this service.
Cookie Chunks	The total number of cookie chunks transmitted by this service.
Data Chunks	The total number of chunks transmitted by this service.
Data Ack Chunks	The total number of data ack chunks transmitted by this service.
Shutdown Complete Chunks	The total number of shutdown complete chunks transmitted by this service.
Heartbeat Chunks	The total number of heartbeat chunks transmitted by this service.
HeartBeat Ack Chunks	The total number of heartbeat ack chunks transmitted by this service.
Abort Chunks	The total number of abort chunks transmitted by this service.
Error Chunks	The total number of error chunks transmitted by this service.
Init Chunks	The total number of initial chunks received by this service.
Init Ack Chunks	The total number of initial ack chunks received by this service.
Shutdown Chunks	The total number of shutdown chunks received by this service.
Cookie Chunks	The total number of cookie chunks received by this service.
Data Chunks	The total number of chunks received by this service.
Data Ack Chunks	The total number of data ack chunks received by this service.
Shutdown Complete Chunks	The total number of shutdown complete chunks received by this service.
Heartbeat Chunks	The total number of heartbeat chunks received by this service.
HeartBeat Ack Chunks	The total number of heartbeat ack chunks received by this service.
Abort Chunks	The total number of abort chunks received by this service.
Error Chunks	The total number of error chunks received by this service.
Init Chunks	The total number of initial chunks retransmitted by this service.
Total Bytes Sent	The total number of SCTP bytes sent by this service.

Field	Description
Total Bytes Received	The total number of SCTP bytes received by this service.
Total Packets Sent	The total number of SCTP packets sent by this service.
Total Packets Received	The total number of SCTP packets received by this service.
SGS-AP Statistics	
SGS-AP Data	
Tx	The total number of messages transmitted by this service for the associated message type.
ReTx	The total number of messages retransmitted by this service for the associated message type.
Rx	The total number of messages received by this service for the associated message type.
Paging Request	The total number of paging request messages.
Paging Reject	The total number of paging reject messages.
Service Request	The total number of service request messages.
Downlink Unitdata	The total number of downlink unit data messages.
Uplink Unitdata	The total number of uplink unit data messages.
Location Update Request	The total number of location update request messages.
Location Update Accept	The total number of location update accept messages.
Location Update Reject	The total number of location update reject messages.
TMSI Reallocation Complete	The total number of TMSI reallocation complete messages.
Alert Request	The total number of alert request messages.
Alert Ack	The total number of alert ack messages.
Alert Reject	The total number of alert reject messages.
UE Activity Indication	The total number of UE activity indication messages.
EPS Detach Indication	The total number of EPS detach indication messages.
EPS Detach Ack	The total number of EPS detach ack messages.
IMSI Detach Indication	The total number of IMSI detach indication messages.
IMSI Detach Ack	The total number of IMSI detach ack messages.
Reset Indication	The total number of reset indication messages.
Reset Ack	The total number of reset ack messages.
MM Information Request	The total number of MM information request messages.
Release Request	The total number of release request messages.
Status	The total number of status messages.
UE Unreachable	The total number of UE unreachable messages.
Unknown MSG	The total number of unknown messages.

■ show sgs-service statistics all

show sgs-service vlr-status full

Table 393. show sgs-service vlr-status Command Output Descriptions

Field	Description
MMEMGR	The MME manager instance where the SGs service is running.
Service ID	The system generated identification number of the SGs service.
Peer ID	The system generated identification number of the VLR's SCTP connection.
VLR Name	The VLR name as configured in the SGs service.
SGS Service Name	The configured SGs service name.
VLR Offload	Displays if the VLR is configured/marked for offload state.
SGS Service Address	The IP address of the interface to which the SGs service is bound.
SGS Service Port	The port number of the interface to which the SGs service is bound.
VLR IP Address (es)	The VLR IP address as configured in the SGs service. If multi-homing is configured, both addresses will be shown. The path status for each is displayed as either UP or DOWN.
VLR Port	The VLR port number as configured in the SGs service.
Assoc State	The current state of the SCTP association, either UP or DOWN.
Assoc State Up Count	The total number of times the SCTP association has come up.
SGS-AP Statistics	
Tx	The total number of messages transmitted by this service for the associated message type.
ReTx	The total number of messages retransmitted by this service for the associated message type.
Rx	The total number of messages received by this service for the associated message type.
Paging Request	The total number of paging request messages.
Paging Reject	The total number of paging reject messages.
Service Request	The total number of service request messages.
Downlink Unitdata	The total number of downlink unit data messages.
Uplink Unitdata	The total number of uplink unit data messages.
Location Update Request	The total number of location update request messages.
Location Update Accept	The total number of location update accept messages.

Field	Description
Location Update Reject	The total number of location update reject messages.
TMSI Reallocation Complete	The total number of TMSI reallocation complete messages.
Alert Request	The total number of alert request messages.
Alert Ack	The total number of alert ack messages.
Alert Reject	The total number of alert reject messages.
UE Activity Indication	The total number of UE activity indication messages.
EPS Detach Indication	The total number of EPS detach indication messages.
EPS Detach Ack	The total number of EPS detach ack messages.
IMSI Detach Indication	The total number of IMSI detach indication messages.
IMSI Detach Ack	The total number of IMSI detach ack messages.
Reset Indication	The total number of reset indication messages.
Reset Ack	The total number of reset ack messages.
MM Information Request	The total number of MM information request messages.
Release Request	The total number of release request messages.
Status	The total number of status messages.
UE Unreachable	The total number of UE unreachable messages.
Unknown MSG	The total number of unknown messages.
Total VLRs	The total number of VLRs configured in the SGs service.

Chapter 148

show sgsn-service

This chapter describes the output of the `show sgsn-service` command.

show sgsn-service all

Table 394. show sgsn-service all Command Output Descriptions

Field	Description
Service name	The SGSN service that is running in this session.
Context	The name of the context in which SGSN service is running.
Status	Status of the SGSN service.
Accounting Context Name	The name of the context in which accounting interface is configured for this SGSN service.
SGSN Number	The number of SGSN system in current network.
Network-sharing	Specifies whether network sharing is enabled or disabled.
Nri bits	Specifies whether network resource identifier (NRI) bit is configured or not in this SGSN service.
SGTP Context	The name of the context in which SGTP service is running.
SGTP Service	The SGTP service that is running the SGTP session in this SGSN service.
MAP Context	The name of the context in which mobile application part (MAP) service, configured in this SGSN service, is running.
MAP Service	The service that is running the MAP session in this SGSN service.
IuPS Context	The name of the context in which UMTS Packet Switch Iu interface (IuPS) service is running.
IuPS Service	The service that is running the IuPS session.
SM-T3385 Timeout	The time-out duration in seconds for GPRS session management timer - T3385 on network side for PDP context activation.
SM-T3386 Timeout	The time-out duration in seconds for GPRS session management timer - T3386 on network side for PDP context modification.
SM-T3395 Timeout	The time-out duration in seconds for GPRS session management timer - T3395 on network side for PDP context deactivation.
SM-Max Activate Retries	Total number of retries for PDP context activation from GPRS session manager.
SM-Max Modify Retries	Total number of retries for PDP context modification from GPRS session manager.
SM-Max Deactivate Retries	Total number of retries for PDP context deactivation from GPRS session manager.
GMM-T3302 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3302 on MS side for GPRS attach procedure or RAU procedure.
GMM-T3322 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3322 on network side for GPRS detach request procedure.
GMM-T3350 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3350 on network side for GPRS attach accept/RAU accept/REALLOC request procedure sent with P-TMSI and/or TMSI.

Field	Description
GMM-Mobil-Reachable Timeout	The time-out duration in seconds for GPRS mobility management timer - Mobile Reachable on network side.
GMM-Implicit-Detach Timeout	The time-out duration in seconds for GPRS mobility management timer - Implicit-Detach on network side.
GMM-Purge Timeout	The time-out duration in seconds for GPRS mobility management timer - Purge to hold the detach of MM context on network side.
GMM-T3313 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3313 on network side for paging procedure initiation.
GMM-Max Page Retries	Maximum number of retries for paging procedure from GPRS mobility manager.
GMM-T3312 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3313 on network side for RAU procedure initiation.
GMM-T3370 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3370 on network side for identity request procedure.
GMM-Max Identity Retries	Maximum number of retries for identity request procedure from GPRS mobility manager.
GMM-T3360 Timeout	The time-out duration in seconds for GPRS mobility management timer - T3360 on network side for Authentication and Cipher request procedure.
GMM-Max Auth Retries	Maximum number of retries for authentication request procedure from GPRS mobility manager.
GMM-Max PTMSIRELOC Retries	Maximum number of retries for Packet-Temporary Mobile Subscriber Identity (P-TMSI) relocation procedure from GPRS mobility manager.
GMM-Perform-Identity-After-Auth	Specifies whether “perform identity after authentication” procedure is enabled or not.
Max simultaneous pdp contexts per MS	Maximum number of simultaneous PDP context allowed on one MS.
SUPER CHARGER	Specifies whether “super charger” feature is enabled or not.
Accounting cdr-types	Specifies type of accounting CDRs configured in this SGSN service.
Charging Characteristics (CC) Profiles	This group provides the charging characteristics profiles configured in this SGSN service.
Profile	Specifies the charging characteristic profile configured in this SGSN service
Bucket	Specifies the charging bucket configured for charging characteristic in this SGSN service
Inform RNC before UE during QoS Modification	Specifies if operator has enabled or disabled the SGSN functionality to inform RNC before UE during QoS modification.

Chapter 149

show sgtp

This chapter describes the outputs of the show **sgtp** command.

show sgtp-service ggsn-table

Table 395. show sgtp-service ggsn-table Command Output Descriptions

Field	Description
GTP	Indicates the GTP version. Possible values are: • 0: GTP-v0 • 1: GTP-v1
Status	Indicates the status of the GTP session. Possible values are: • I: Inactive • A: Active
GTPC Echo	Indicates the status of the GTPC echo. Possible values are: • D: Disabled • E: Enabled
PLMN Type	Indicates the type of Public Land Mobile Network area. Possible values are: • H: Home networks • F: Foreign networks • U: Unknown networks
SGTPC Stats	Indicates the availability of the SGTPC statistics. Possible values are: • A: Available • U: Unavailable
Service ID	Indicates the SGTP service identifier.
GGSN Address	Indicates the IP address of GGSN service.
Restart Counter	Indicates the restart counter of SGTP service.
No. of restart	Indicates the total number of restarts happened for SGTP session.
Curr sessions	Total number of SGTP session currently running.
Max sessions	Indicates the maximum number of SGTP session allowed.

show sgtp-service sgsn-table

Table 396. show sgtp-service sgsn-table Command Output Descriptions

Field	Description
GTP	Indicates the GTP version. Possible values are: • 0: GTP-v0 • 1: GTP-v1
GTPC Echo	Indicates the status of the GTPC echo. Possible values are: • D: Disabled • E: Enabled
PLMN Type	Indicates the type of Public Land Mobile Network area. Possible values are: • H: Home networks • F: Foreign networks • U: Unknown networks
SGTPC Stats	Indicates the availability of the SGTPC statistics. Possible values are: • A: Available • U: Unavailable
Service ID	Indicates the SGTP service identifier.
SGSN Address	Indicates the IP address of SGGSN service.

Chapter 150

show sgtpu

This chapter describes the outputs of the **show sgtpu** command.

show sgtpu statistics

Table 397. show sgtpu statistics Command Output Descriptions

Field	Description
GTPU Statistics:	
Total Packets Sent	
Packets sent to GGSN	Total number of packets for GTP-U messages sent to GGSN.
Packets sent to RNC	Total number of packets for GTP-U messages sent to RNC.
Packets sent to SGSN	Total number of packets for GTP-U messages sent to SGSN.
Total Bytes Sent	
Bytes sent to GGSN	Total number of bytes for GTP-U messages sent to GGSN at a given instance of time.
Bytes sent to RNC	Total number of bytes for GTP-U messages sent to the RNC at a given instance in time.
Bytes sent to SGSN	Total number of bytes for GTP-U messages sent to the SGSN at a given instance in time.
Total Packets Rcvd	
Total Packets from GGSN	Total number of packets for GTP-U messages received from GGSN.
Pkts queued	Total number of packets queued for GTP-U messages from GGSN.
Pkts forward from queue	Description: This proprietary statistic indicates the total number of packets that are forwarded from the GGSN queue. Triggers: Increments when a packet is forwarded from the GGSN queue. Availability: per SGTP service
Pkts dropped	Total number of packets dropped for GTP-U messages from GGSN.
Queue Full	Total number of packets dropped due to queued buffer limit full for GTP-U messages from GGSN.
Ctxt Preserved	Total number of GTP packets from GGSN dropped in preserved context.
Unknown session	Total number of GTP packets from GGSN dropped in unknown session.
Pkts when dp suspended	Description: This proprietary statistic indicates the total number of packets dropped because of DP session in suspended state. Triggers: Increments when a DP session has deactivation initiated or path failure is detected for the PDP context. Availability: per SGTP service
Sess Dealloc started	Total number of GTP packets from peer GGSN received during session deallocation procedure.

Field	Description
Paging Failure	Total number of GTP packets dropped due to paging failure when there was downlink data from GGSN.
Seq Num Not Pres(V0)	Total number of packets from GGSN dropped as GTP-Uv0 messages received with sequence number flag set to false.
Unknown version	Total number of GTP-U packets received from GGSN with unknown GTP version.
Invalid msg length	Total number of GTP packets from GGSN dropped as GTP-U messages received with invalid message length.
Traffic Policing	Total number of GTP-U packets received from GGSN under subscriber traffic policing support.
Iu Release	Description: Total number of downlink packets that were queued but dropped due to IU/RAB release. Triggers: Counter at the new SGSN increments when Iu/RAB gets released while inter-SGSN-RAU is in progress and downlink data is queued during RAU. Availability: per SGTP service
T3-tunnel Timer expiry	Description: Total number of downlink packets that were queued but dropped due to T3-tunnel timer expiry during inter-SGSN RAU procedure. Triggers: During inter-SGSN RAU at the old SGSN, neither Cancel Location or SGSN Context Ack are received when t3-tunnel timer is fired causing the RAU procedure to abort. If old RABs are not available, the data queued during the RAU will be dropped. Availability: per SGTP service
BVC Reset/Block Rcvd	Description: This proprietary statistic indicates the total number of packets that are dropped from the GGSN queue, because of BVC Block or BVC Reset messages received for the MM context. Triggers: Increments when a packet is dropped from the GGSN queue because of BVC Reset/BVC Block received for the MM context. Availability: per SGTP service
Total Bytes Rcvd	
Total Bytes from SGSN	Total number of bytes for GTP-U messages received from GGSN.
Bytes queued	Total number of bytes queued for GTP-U messages from GGSN.
Bytes forward from queue	Description: This proprietary statistic indicates the total number of bytes that are forwarded from the GGSN queue. Triggers: Increments when a byte is forwarded from the GGSN queue. Availability: per SGTP service
Bytes dropped	Total number of bytes dropped for GTP-U messages from GGSN.
Queue Full	Total number of bytes dropped due to queued buffer limit full for GTP-U messages from GGSN.
Ctxt Preserved	Total number of GTP bytes from GGSN dropped in preserved context.
Unknown session	Total number of GTP bytes from GGSN dropped in unknown session.
Pkts when dp suspended	Description: This proprietary statistic indicates the total number of bytes dropped because of DP session in suspended state. Triggers: Increments when a DP session has deactivation initiated or path failure is detected for the PDP context. Availability: per SGTP service
Sess Dealloc started	Total number of GTP bytes from peer GGSN received during session deallocation procedure.

Field	Description
Paging Failure	Total number of GTP bytes dropped due to paging failure when there was downlink data from GGSN.
Seq Num Not Pres(V0)	Total number of bytes from GGSN dropped as GTP-Uv0 messages received with sequence number flag set to false.
Unknown version	Total number of GTP-U bytes received from GGSN with unknown GTP version.
Invalid msg length	Total number of GTP bytes from GGSN dropped as GTP-U messages received with invalid message length.
Traffic Policing	Total number of GTP-U bytes received from GGSN under subscriber traffic policing support.
Iu Release	Description: Total number of downlink bytes that were queued but dropped due to IU/RAB release. Triggers: Counter at the new SGSN increments when Iu/RAB gets released while inter-SGSN-RAU is in progress and downlink data is queued during RAU. Availability: per SGTP service
T3-tunnel Timer expiry	Description: Total number of downlink bytes that were queued but dropped due to T3-tunnel timer expiry during inter-SGSN RAU procedure. Triggers: During inter-SGSN RAU at the old SGSN, neither Cancel Location or SGSN Context Ack are received when t3-tunnel timer is fired causing the RAU procedure to abort. If old RABs are not available, the data queued during the RAU will be dropped. Availability: per SGTP service
BVC Reset/Block Rcvd	Description: This proprietary statistic indicates the total number of bytes that are dropped from the GGSN queue, because of BVC Block or BVC Reset messages received for the MM context. Triggers: Increments when a byte is dropped from the GGSN queue because of BVC Reset/BVC Block received for the MM context. Availability: per SGTP service
Total Error Ind Sent	Indicates the total number of error indication messages sent to GGSN.
Sent to GGSN	Description: This proprietary counter indicates the total number of GTP-U (v1 and v0) messages sent to GGSN with error indication. Triggers: Increments when SGSN receives datapacket from GGSN and no PDP context exists for this data packet on SGSN. In this case, SGSN sends error indications to GGSN. Availability: per GGSN
Sent to RNC	Description: This proprietary counter indicates the total number of GTP-U (v1 and v0) messages sent to RNC with error indication. Triggers: Increments when SGSN receives datapacket from RNC and no PDP context exists for this data packet on SGSN. In this case, SGSN sends error indications to RNC. Availability: per RNC
Total Error Ind Rcvd	Indicates the total number of error indication messages received by SGSN.
Rcvd from GGSN	Description: This proprietary counter indicates the total number of GTP-U (v1 and v0) messages received by SGSN from GGSN with error indication. Triggers: Increments when SGSN receives error indication messages from GGSN. Availability: per GGSN
Rcvd from RNC	Description: This proprietary counter indicates the total number of GTP-U (v1 and v0) messages received by SGSN from RNC with error indication. Triggers: Increments when SGSN receives error indication messages from RNC. Availability: per RNC

Field	Description
Rcvd from GGSN through RNC	Description: This proprietary counter indicates the total number of error indication messages from GGSN. If direct tunnel is enabled, data flows between RNC and GGSN. When the RNC receives GTPU-PDU from the GGSN for which no RAB context exists, RNC discards GTPU-PDU and returns error indication to GGSN. In order to notify SGSN, GGSN sends UPC request with EI Flag to SGSN. Triggers: Increments when SGSN receives error indication messages from GGSN through RNC. Availability: per GGSN
Rcvd from RNC through GGSN	Description: This proprietary counter indicates the total number of error indication messages from RNC. If direct tunnel is enabled, data flows between RNC and GGSN. GGSN sends Error indication to RNC, and in order to notify SGSN, RNC sends RAB Release Request with the error cause 'GTP Resources Unavailable'. Triggers: Increments when SGSN receives error indication messages from GGSN through RNC. This is when SGSN receives (Error indication message) Update PDP Context request with EI (Error Indication) flag from GGSN. Availability: per RNC

Chapter 151

show sgw

This chapter describes the output of the **show sgw** command.

show sgw-service all

Displays configuration information for all S-GW services configured on the system.

Table 398. show sgw-service all Command Output Descriptions

Field	Description
Service name	The name of the S-GW service.
Service-ID	The system generated identification number of the service.
Context	The context name where the service is located.
Accounting context	The context where the accounting configuration and or interfaces are configured.
Status	The status of the service.
Egress Protocol	The egress protocol, such as “gtp-pmip”
Ingress EGTP service	The ingress eGTP service configured for this S-GW service.
Egress context	The egress context configured for this service.
Egress EGTP service	The egress eGTP service configured for this S-GW service.
Egress MAG service	The egress Mobile Access Gateway (MAG) service configured for this service.
IMS auth. service	The IMS authorization (IMSA) service used by this service for IMS subscribers.
Newcall policy	The newcall policy configured for this service.
QCI-QOS mapping table	The QoS Class Index to QoS mapping table configured for use with this service.
GTPC Path Failure Handling	
S11-Interface	local-purge: The S-GW clears the affected bearer (or PDN if the path failure is received on a default bearer) locally without informing the peers. This is the default action for all interfaces. signal-peer: The S-GW initiates control signalling towards the peer MME and P-GW.
S5-Interface	
S1U-Interface	
S5U-Interface	
S4U-Interface	
S12-Interface	
GTPU Error Indication Handling	
S1U-Interface	local-purge: The S-GW clears the affected bearer (or PDN if the error indication is received on the default bearer) locally without informing the peers.
S5U-Interface	

Field	Description
S12-Interface	page-ue: The S-GW moves the complete UE state to S1-Idle and starts paging for this UE. This is the default action for GTP-U error indication messages received on the S12 and S1-U interfaces.
S4U-Interface	
PLMN ID List	List of Public Land Mobile Network (PLMN) identifiers associated with the operator policy for this service. A PLMN ID consists of the Mobile Country Code (MCC) + Mobile network Code (MCC).
Subscriber Map Name	Name of the subscriber map associated with the operator policy for this service.

show sgw-service statistics all verbose

Table 399. show sgw-service statistics all Command Output Descriptions

Field	Description
Session Level Statistics	
Current	
UE	
Idle	The total number of UE sessions currently idle.
Active	The total number of UE sessions currently active.
PDN	The total number of current PDN sessions.
Home	The total number of current home PDN sessions.
Roaming	The total number of current roaming PDN sessions.
Visiting	The total number of current visiting PDN sessions.
Beareres	The total number of current Beareres.
Ind-Fwd-Tunnels	Indirect forward tunneling: The total number of current tunnels.
Ind-Fwd-Beareres	Indirect forward tunneling: The total number of current beareres.
Traffic Policing	
uplink pkts red	The total number of uplink packets marked red by the trTCM algorithm.
uplink bytes red	The total number of uplink bytes marked red by the trTCM algorithm.
uplink pkts yellow	The total number of uplink packets marked yellow by the trTCM algorithm.
uplink bytes yellow	The total number of uplink bytes marked yellow by the trTCM algorithm.
uplink pkts green	The total number of uplink packets marked green by the trTCM algorithm.
uplink bytes green	The total number of uplink bytes marked green by the trTCM algorithm.
uplink pkts dropped	The total number of uplink packets dropped due to exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
uplink bytes dropped	The total number of uplink bytes dropped due to exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
uplink pkts low ip prec	The total number of uplink packets that were transmitted after the IP precedence was lowered due to exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
uplink bytes low ip prec	The total number of uplink bytes that were transmitted after the IP precedence was lowered due to exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
uplink pkts transmitted	The total number of uplink packets that were transmitted even after exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).

Field	Description
uplink bytes transmitted	The total number of uplink packets that were transmitted even after exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
downlink pkts red	The total number of downlink packets marked red by the trTCM algorithm.
downlink bytes red	The total number of downlink bytes marked red by the trTCM algorithm.
downlink pkts yellow	The total number of downlink packets marked yellow by the trTCM algorithm.
downlink bytes yellow	The total number of downlink bytes marked yellow by the trTCM algorithm.
downlink pkts green	The total number of downlink packets marked green by the trTCM algorithm.
downlink bytes green	The total number of downlink bytes marked green by the trTCM algorithm.
downlink pkts dropped	The total number of downlink packets dropped due to exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
downlink bytes dropped	The total number of downlink bytes dropped due to exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
downlink pkts low ip prec	The total number of downlink packets that were transmitted after the IP precedence was lowered due to exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
downlink bytes low ip prec	The total number of downlink bytes that were transmitted after the IP precedence was lowered due to exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
downlink pkts transmitted	The total number of downlink packets that were transmitted even after exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
downlink bytes transmitted	The total number of downlink packets that were transmitted even after exceeding or violating the Peak Information Rate (PIR) or the Committed Information Rate (CIR).
Setup	
UE	The total number of UE session set up.
PDN	The total number of PDN sessions set up.
Bearers	The total number of bearers set up.
PDNs Setup Per PDN-type	
IPv4	The total number of PDN sessions set up using IPv4.
IPv6	The total number of PDN sessions set up using IPv6.
IPv4v6	The total number of PDN sessions set up using IPv4 in IPv6.
PDNs Setup Per Interface	
S11	The total number of PDN sessions set up on an S11 interface.
S4	The total number of PDN sessions set up on an S4 interface.
PDNs Setup Per S5 Proto	

Field	Description
GTP	The total number of PDN sessions set up using GTP tunneling.
PMIP	The total number of PDN sessions set up using PMIP tunneling.
PDNs Released	
IPv4	The total number of PDN sessions released using IPv4.
IPv6	The total number of PDN sessions released using IPv6.
IPv4v6	The total number of PDN sessions released using IPv4 in IPv6.
PDNs Released Reason	
MME Ini	The total number of PDN sessions released - initiated by the MME.
PGW Ini	The total number of PDN sessions released - initiated by the P-GW.
PCRF Ini	The total number of PDN sessions released - initiated by the PCRF.
Local	The total number of PDN sessions released - initiated locally.
S1 Error Ind	The total number of PDN sessions released due to an S1 interface error.
S5 Error Ind	The total number of PDN sessions released due to an S5 interface error.
Path Failure S1 I	The total number of PDN sessions released due to an S1 I path failure.
Path Failure S1-U	The total number of PDN sessions released due to an S1-U path failure.
Path Failure S5	The total number of PDN sessions released due to an S5 path failure.
Path Failure S5-U	The total number of PDN sessions released due to an S5-U path failure.
Path Failure S4	The total number of PDN sessions released due to an S4 path failure.
Path Failure S4-U	The total number of PDN sessions released due to an S4-U path failure.
Path Failure S12	The total number of PDN sessions released due to an S12 path failure.
Other	The total number of PDN sessions released due to other reasons.
PDNs Rejected	
IPv4	The total number of PDN sessions rejected using IPv4.
IPv6	The total number of PDN sessions rejected using IPv6.
IPv4v6	The total number of PDN sessions rejected using IPv4 in IPv6.
PDNs Rejected Reason	
PGW Ini	The total number of PDN sessions rejected - initiated by the P-GW.
License	The total number of PDN sessions rejected due to license reasons.
Newcall	The total number of PDN sessions rejected due to newcall reasons.
Overload	The total number of PDN sessions rejected due to overload reasons.
Congestion	The total number of PDN sessions rejected due to congestion reasons.
Other	The total number of PDN sessions rejected due to other reasons.

Field	Description
Bearer Level Statistics	
Total EPS Bearers Setup	
QCI 1 - 9	The total number of EPS bearers set up, with a QoS Class Index.
Non-Std QCI	The total number of EPS bearers set up, with a non-standard QoS Class Index.
Total EPS Bearers Released	
QCI 1 - 9	The total number of EPS bearers released, with a QoS Class Index.
Non-Std QCI	The total number of EPS bearers released, with a non-standard QoS Class Index.
Total EPS Bearers Modified	
QCI 1 - 9	The total number of EPS bearers modified, with a QoS Class Index.
Non-Std QCI	The total number of EPS bearers modified, with a non-standard QoS Class Index.
Dedicated Bearers Released Reason	
PGW Ini	The total number of dedicated bearers released - initiated by the P-GW.
PCRF Ini	The total number of dedicated bearers released - initiated by the PCRF.
S1 Error Ind	The total number of dedicated bearers released due to an S1 interface error.
S5 Error Ind	The total number of dedicated bearers released due to an S5 interface error.
S4-U Error Ind	The total number of dedicated bearers released due to an S4-U interface error.
S12 Error Ind	The total number of dedicated bearers released due to an S12 interface error.
Local	The total number of dedicated bearers released - initiated locally.
PDN Down	The total number of dedicated bearers released due to an inaccessible PDN.
Path Failure S1-U	The total number of dedicated bearers released due to an S1-U path failure.
Path Failure S5-U	The total number of dedicated bearers released due to an S5-U path failure.
Path Failure S4-U	The total number of dedicated bearers released due to an S4-U path failure.
Path Failure S12	The total number of dedicated bearers released due to an S12U path failure.
Other	The total number of dedicated bearers released due to other reasons.
S1U Total Data Statistics	
Uplink	
Pkts	The total number of uplink packets over the S1-U interface.
Bytes	The total number of uplink bytes over the S1-U interface.
Dropped Pkts	The total number of dropped uplink packets over the S1-U interface.
Dropped Bytes	The total number of dropped uplink bytes over the S1-U interface.
Pkts QCI 0 - 8	The total number of uplink packets with a QoS Class Index.

Field	Description
Pkts Non-Std QCI	The total number of uplink packets with a non-standard QoS Class Index.
Bytes QCI 0 - 8	The total number of uplink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of uplink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI 0 - 8	The total number of dropped uplink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped uplink packets with a non-standard QoS Class Index.
Dropped Bytes QCI 0 - 8	The total number of dropped uplink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped uplink bytes with a non-standard QoS Class Index.
Non-Std QCI	The total number of uplink bytes dropped with a non-standard QoS Class Index.
Downlink	
Pkts	The total number of downlink packets over the S1-U interface.
Bytes	The total number of downlink bytes over the S1-U interface.
Dropped Pkts	The total number of dropped downlink packets over the S1-U interface.
Dropped Bytes	The total number of dropped downlink bytes over the S1-U interface.
Pkts QCI 0 - 8	The total number of downlink packets with a QoS Class Index.
Pkts Non-Std QCI	The total number of downlink packets with a non-standard QoS Class Index.
Bytes QCI 0 - 8	The total number of downlink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of downlink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI 0 - 8	The total number of dropped downlink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped downlink packets with a non-standard QoS Class Index.
Dropped Bytes QCI 0 - 8	The total number of dropped downlink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped downlink bytes with a non-standard QoS Class Index.
S4U Total Data Statistics	
Uplink	
Pkts	The total number of uplink packets over the S4-U interface.
Bytes	The total number of uplink bytes over the S4-U interface.
Dropped Pkts	The total number of dropped uplink packets over the S4-U interface.
Dropped Bytes	The total number of dropped uplink bytes over the S4-U interface.

Field	Description
Pkts QCI 0 - 8	The total number of uplink packets with a QoS Class Index.
Pkts Non-Std QCI	The total number of uplink packets with a non-standard QoS Class Index.
Bytes QCI 0 - 8	The total number of uplink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of uplink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI 0 - 8	The total number of dropped uplink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped uplink packets with a non-standard QoS Class Index.
Dropped Bytes QCI 0 - 8	The total number of dropped uplink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped uplink bytes with a non-standard QoS Class Index.
Non-Std QCI	The total number of uplink bytes dropped with a non-standard QoS Class Index.
Downlink	
Pkts	The total number of downlink packets over the S4-U interface.
Bytes	The total number of downlink bytes over the S4-U interface.
Dropped Pkts	The total number of dropped downlink packets over the S4-U interface.
Dropped Bytes	The total number of dropped downlink bytes over the S4-U interface.
Pkts QCI 0 - 8	The total number of downlink packets with a QoS Class Index.
Pkts Non-Std QCI	The total number of downlink packets with a non-standard QoS Class Index.
Bytes QCI 0 - 8	The total number of downlink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of downlink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI 0 - 8	The total number of dropped downlink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped downlink packets with a non-standard QoS Class Index.
Dropped Bytes QCI 0 - 8	The total number of dropped downlink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped downlink bytes with a non-standard QoS Class Index.
S12 Total Data Statistics	
Uplink	
Pkts	The total number of uplink packets over the S12 interface.
Bytes	The total number of uplink bytes over the S12 interface.
Dropped Pkts	The total number of dropped uplink packets over the S12 interface.

Field	Description
Dropped Bytes	The total number of dropped uplink bytes over the S12 interface.
Pkts QCI0 - 8	The total number of uplink packets with a QoS Class Index.
Pkts Non-Std QCI	The total number of uplink packets with a non-standard QoS Class Index.
Bytes QCI0 - 8	The total number of uplink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of uplink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI0 - 8	The total number of dropped uplink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped uplink packets with a non-standard QoS Class Index.
Dropped Bytes QCI0 - 8	The total number of dropped uplink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped uplink bytes with a non-standard QoS Class Index.
Non-Std QCI	The total number of uplink bytes dropped with a non-standard QoS Class Index.
Downlink	
Pkts	The total number of downlink packets over the S12 interface.
Bytes	The total number of downlink bytes over the S12 interface.
Dropped Pkts	The total number of dropped downlink packets over the S12 interface.
Dropped Bytes	The total number of dropped downlink bytes over the S12 interface.
Pkts QCI0 - 8	The total number of downlink packets with a QoS Class Index.
Pkts Non-Std QCI	The total number of downlink packets with a non-standard QoS Class Index.
Bytes QCI0 - 8	The total number of downlink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of downlink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI0 - 8	The total number of dropped downlink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped downlink packets with a non-standard QoS Class Index.
Dropped Bytes QCI0 - 8	The total number of dropped downlink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped downlink bytes with a non-standard QoS Class Index.
S5 Total Data Statistics	
Uplink	
Pkts	The total number of uplink packets over the S5 interface.
Bytes	The total number of uplink bytes over the S5 interface.

Field	Description
Dropped Pkts	The total number of dropped uplink packets over the S5 interface.
Dropped Bytes	The total number of dropped uplink bytes over the S5 interface.
Pkts QCI 0 - 8	The total number of uplink packets with a QoS Class Index.
Pkts Non-Std QCI	The total number of uplink packets with a non-standard QoS Class Index.
Bytes QCI 0 - 8	The total number of uplink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of uplink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI 0 - 8	The total number of dropped uplink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped uplink packets with a non-standard QoS Class Index.
Dropped Bytes QCI 0 - 8	The total number of dropped uplink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped uplink bytes with a non-standard QoS Class Index.
Non-Std QCI	The total number of uplink bytes dropped with a non-standard QoS Class Index.
Downlink	
Pkts	The total number of downlink packets over the S5 interface.
Bytes	The total number of downlink bytes over the S5 interface.
Dropped Pkts	The total number of dropped downlink packets over the S5 interface.
Dropped Bytes	The total number of dropped downlink bytes over the S5 interface.
Pkts QCI 0 - 8	The total number of downlink packets with a QoS Class Index.
Pkts Non-Std QCI	The total number of downlink packets with a non-standard QoS Class Index.
Bytes QCI 0 - 8	The total number of downlink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of downlink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI 0 - 8	The total number of dropped downlink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped downlink packets with a non-standard QoS Class Index.
Dropped Bytes QCI 0 - 8	The total number of dropped downlink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped downlink bytes with a non-standard QoS Class Index.
S8 Total Data Statistics	
Uplink	
Pkts	The total number of uplink packets over the S8 interface.

■ show sgw-service statistics all verbose

Field	Description
Bytes	The total number of uplink bytes over the S8 interface.
Dropped Pkts	The total number of dropped uplink packets over the S8 interface.
Dropped Bytes	The total number of dropped uplink bytes over the S8 interface.
Pkts QCI0 - 8	The total number of uplink packets with a QoS Class Index.
Pkts Non-Std QCI	The total number of uplink packets with a non-standard QoS Class Index.
Bytes QCI0 - 8	The total number of uplink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of uplink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI 0 - 8	The total number of dropped uplink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped uplink packets with a non-standard QoS Class Index.
Dropped Bytes QCI 0 - 8	The total number of dropped uplink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped uplink bytes with a non-standard QoS Class Index.
Non-Std QCI	The total number of uplink bytes dropped with a non-standard QoS Class Index.
Downlink	
Pkts	The total number of downlink packets over the S8 interface.
Bytes	The total number of downlink bytes over the S8 interface.
Dropped Pkts	The total number of dropped downlink packets over the S8 interface.
Dropped Bytes	The total number of dropped downlink bytes over the S8 interface.
Pkts QCI0 - 8	The total number of downlink packets with a QoS Class Index.
Pkts Non-Std QCI	The total number of downlink packets with a non-standard QoS Class Index.
Bytes QCI0 - 8	The total number of downlink bytes with a QoS Class Index.
Bytes Non-Std QCI	The total number of downlink bytes with a non-standard QoS Class Index.
Dropped Pkts QCI 0 - 8	The total number of dropped downlink packets with a QoS Class Index.
Dropped Pkts Non-Std QCI	The total number of dropped downlink packets with a non-standard QoS Class Index.
Dropped Bytes QCI 0 - 8	The total number of dropped downlink bytes with a QoS Class Index.
Dropped Bytes Non-Std QCI	The total number of dropped downlink bytes with a non-standard QoS Class Index.
Inter-SGW Handover Statistics	
PDNs Incoming	

Field	Description
X2 Based	The total number of incoming X2 -based PDNs.
Idle-mode TAU	The total number of incoming PDNs Incoming - Idle-mode TAU
S1 Based	The total number of incoming S1 -based PDNs.
PDNs Outgoing	The total number of outgoing PDNs.
Intra-SGW Handover Statistics	
Intra-MME	Intra-MME
Inter-MME	Inter-MME
Intra-SGSN	Intra-SGSN
Inter-SGSN	Inter-SGSN
MME-to-SGSN	MME-to-SGSN
SGSN-to-MME	SGSN-to-MME
Paging Statistics	
Requests	The total number of paging requests.
Success	The total number of paging successes.
Rejects	The total number of paging rejects.
Failures	The total number of paging failures.
Active-Idle Ue Transitions	The total number of Active-Idle UE transitions
Idle-Active Ue Transitions	The total number of Idle-Active UE transitions
Paging Related Data Statistics	
Packets Buffered	The total number of buffered paging packets.
Bytes Buffered	The total number of buffered paging bytes.
Packets Discarded	The total number of discarded paging packets.
Bytes Discarded	The total number of discarded paging bytes.
Idle Mode ACL Statistics	
Packets Discarded	The total number of discarded paging packets due to ACL idle mode.
Bytes Discarded	The total number of discarded paging bytes due to ACL idle mode.
Indirect Forwarding Statistics	
Tunnels Setup	The total number of indirect forwarding tunnels setup.
Tunnels Failed	The total number of failed indirect forwarding tunnels.
Tunnels Released	The total number of indirect forwarding tunnels released.
Bearers Setup	The total number of indirect forwarding bearers setup.

■ show sgw-service statistics all verbose

Field	Description
Bearers Released	The total number of indirect forwarding bearers released.
DL Packets Forwarded	The total number of indirect forwarding download packets forwarded.
DL Bytes Forwarded	The total number of indirect forwarding download bytes forwarded.
Source Violations	
Packets Dropped	The total number of packets dropped due to source violations.
Bytes Dropped	The total number of bytes dropped due to source violations.
PDN PLMN Statistics	
Home PDNs	
PDNs active	The total number of home PDNs active.
PDNs setup	The total number of home PDNs setup.
PDNs released	The total number of home PDNs released.
Roaming PDNs	
PDNs active	The total number of roaming PDNs active.
PDNs setup	The total number of roaming PDNs setup.
PDNs released	The total number of roaming PDNs released.
Visiting PDNs	
PDNs active	The total number of visiting PDNs active.
PDNs setup	The total number of visiting PDNs setup.
PDNs released	The total number of visiting PDNs released.
Miscellaneous	
Uplink Data Before MBReq	Uplink data before MBReq
CBReq Rcvd Before CSRsp	CBReq Rcvd before CSRsp

Chapter 152

show sms statistics

This chapter includes the `show sms statistics` command output tables.

show sms statistics gprs only verbose

Table 400. show subscribers sms statistics gprs only verbose Command Output Descriptions

Field	Description
Session Statistics	Session statistics includes parameters related to SMS session between the MS and network. It includes parameters such as: • MO SMS (in progress) • MT SMS (in progress) • MT SMS (in queue) • SMMA (in progress) • MO SMS (Attempted) • MT SMS (Attempted) • SMMA (Attempted) • MO SMS (successful) • MT SMS (successful) • SMMA (successful)
MO SMS (In Progress)	Total number SMS messages that are Mobile Originated (MO) i.e. sent from an UE or MS and are being received by network.
MT SMS (In Progress)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are being delivered by network.
MT SMS (In Queue)	Total number of SMS messages that are mobile Terminated i.e. being sent to UE or MS and are in queue for being delivered by the network.
SMMA (In Progress)	Total number of SMMA messages in progress for the reception by the network. An SMMA message is used by the MS to indicate the network about availability of the memory in MS, to receive one or more short messages.
MO SMS (Attempted)	Total number of SMS messages that are Mobile Originated (MO) i.e. sent from an UE or MS and are being attempted to be received by the network.
MO SMS (Successful)	Total number of SMS messages that are Mobile Originated (MO) i.e. being sent to the network by UE or MS and are successfully received by the network.
MT SMS (Attempted)	Total number of SMS messages that are Mobile Terminated i.e. being sent to a UE or MS and are being attempted to be delivered by the network.
MT SMS (Successful)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are successfully delivered by the network.
SMMA (Attempted)	Total number of SMMA messages that the network has attempted to receive. An SMMA message is used by the MS to indicate the network about the availability of the memory in MS, to receive one or more short messages.

Field	Description
SMMA (Successful)	Total number of SMMA messages that are successfully received by the network. An SMMA message is used by the MS to indicate the network about the availability of the memory in MS to receive one or more short messages.
Message Statistics	Specifies received and transmitted data, acknowledgement and error messages between the MS and network for RP as well as CP layers along with the message drop counters. Message statistics includes, parameters related to: • CP layer messages • RP layer messages • Message drop counters
CP Layer Messages	Short Message Service Control Protocol (SM –CP) is used for communication by the SMC entities from MS and network. Following are components of CP layer messages: • CP Data: This message is sent between an MS and MSC in both directions. It contains the user data to be relayed between CM – users and associated parameters such as protocol discriminator, transaction identifier, message type and CP user data. • CP Ack: This message is sent between MS and MSC in both directions and is used to acknowledge the reception of a CP-Data message. It contains protocol discriminator, transaction identifier and message type. • CP Error: This message is sent between an MS and MSC in both directions and is used to convey the error information. It contains protocol discriminator, transaction identifier, message type and CP cause.
CP Data (Tx)	Total number of transmitted CP data messages.
CP Ack (Tx)	Total number of transmitted CP acknowledgement messages.
CP Error (Tx)	Total number of transmitted CP error messages.
CP Data (Rx)	Total number of received CP data messages.
CP Ack (Rx)	Total number of received CP acknowledgement messages.
CP Error (Rx)	Total number of received CP error messages.
CP Error Cause Stats	The CP error message conveys error information that is sent between MS and network in both directions. The message contains protocol discriminator, transaction identifier, message type and CP cause. CP error cause statistics includes: • Network failure • Congestion • Inlaid semantic • Invalid mandatory information • Invalid message type • Invalid protocol state • Invalid IE • Protocol error • Unidentified cause

Field	Description
Network Failure(Tx)	Total number of errors caused due to network failure while transmitting the message.
Congestion(Tx)	Total number of errors caused due to congestion while transmitting the message.
Inlaid Sematic (Tx)	Total number of errors caused due to invalid sematic while transmitting the message.
Invalid Mandatory Info (Tx)	Total number of errors caused due to invalid mandatory information while transmitting the message.
Invalid Message Type(Tx)	Total number of errors caused due to invalid schematic while transmitting the message.
Invalid Protocol State(Tx)	Total number of errors caused due to invalid protocol state while transmitting the message.
Invalid IE (Tx)	Total number of errors caused due to invalid Information Element (IE) while transmitting the message.
Protocol Error (Tx)	Total number of errors caused due to protocol error or mismatched protocols while transmitting the message.
Undefined Cause (Tx)	Total number of errors caused due to unknown or undefined causes while transmitting the message.
Network Failure(Rx)	Total number of errors caused due to network media failure while receiving the message.
Congestion(Rx)	Total number of errors caused due to congestion while receiving the message.
Inlaid Sematic (Rx)	Total number of errors caused due to invalid message sematic while receiving the message.
Invalid Mandatory Info (Rx)	Total number of errors caused due to invalid mandatory information while receiving the message.
Invalid Message Type(Rx)	Total number of errors caused due to invalid message type while receiving the message.
Invalid Protocol State(Rx)	Total number of errors caused due to invalid protocol state while receiving the message.
Invalid IE (Rx)	Total number of errors caused due to invalid Information Element (IE) while receiving the message.
Protocol Error (Rx)	Total number of errors caused due to protocol error while receiving the message the message.
Undefined Cause (Rx)	Total number of errors caused due to unknown or un-defined cause while receiving the message.
Memory Capacity Exceeded (Rx)	Total number of errors caused due to lack of storage capacity in the MS while receiving the message.
Invalid Reference Number (Tx)	Total number of errors caused due to wrong or non-existent reference number while transmitting the message.
Invalid Semantic(Tx)	Total number of errors caused due to wrong or non-existent semantic information while transmitting the message.
Invalid Mandatory Info (Tx)	Total number of errors caused due to non-semantic mandatory information while transmitting the message.
Invalid Message Type (Tx)	Total number of errors caused due to non-existent or non-implemented message type while transmitting the message.
Invalid Protocol State (Tx)	Total number of errors caused due to wrong or non-implemented protocol state used while transmitting the message.

Field	Description
Invalid IE (Tx)	Total number of errors caused due to wrong or un-implemented Information Element (IE) used while transmitting the message.
Protocol Error (Tx)	Total number of errors caused due to wrong or non-implemented protocol used while transmitting the message.
Invalid Reference Number (Rx)	total number of errors caused due to wrong or non-existent reference number while receiving the message.
Invalid Semantic (Rx)	Total number of errors caused due to wrong or non-existent semantic information while receiving the message.
Invalid Mandatory Info (Rx)	Total number of errors caused due to invalid mandatory information while receiving the message.
Invalid Message Type (Rx)	Total number of errors caused due to non-existent or non-implemented message type while receiving the message.
Invalid Protocol State (Rx)	Total number of errors caused due to wrong or non-implemented protocol state used while receiving the message.
Invalid IE (Rx)	Total number of errors caused due to wrong or un-implemented Information Element (IE) used while receiving the message.
Protocol Error (Rx)	Total number of errors caused due to wrong or non-implemented protocol used while receiving the message.
Undefined Error (Rx)	Total number of errors caused due to unknown or un-defined cause while receiving the message.
Message Drop Counters	Message drop counter for CP layer comprises number of CP layer messages that were dropped by the MS or network. The message drop counters are categorized as: • CP Data • CP Ack • CP Error
CP Data	Total number of CP data messages that were dropped.
Retransmission Drops	Total number of CP data re-transmission messages that were dropped.
Unknown TID Drops	A Control Protocol message is composed of • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs) This specifies total number of messages dropped due to unknown TID.
CP Ack	Total number of CP acknowledgement messages that were dropped.
CP Error	Total number of CP error messages that were dropped.

Field	Description
CP Error Drop for Invalid TId Received	A Control Protocol message is composed of • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs) This specifies total number of CP error messages that were dropped due to reception of wrong or non-existent Transaction Identifier.
RP Layer Messages	Short Message Relay Protocol (SM-RP), that is used for communication between the SMR entities from MS and network. Following are the components of RP layer messages: • RP Data: This message is sent between MS and the MSC in both directions. It contains message type, message reference, originator address, destination address along with the user data. • RP Ack: This message sent between the MS and MSC in both directions. This message is used to relay the acknowledgement of received RP- data or RP-SMMA messages. It contains message type, message reference and user data. • RP –Error: This message is sent between the MS and the MSC in both directions and is used to relay the cause of erroneous short message or notification transfer attempt. It contains message type, message reference, and cause and user data.
RP Data (Tx)	Total number of transmitted RP data messages.
RP AcK (Tx)	Total number of transmitted RP acknowledge messages.
RP Error (Tx)	Total number of transmitted RP error messages.
RP Data (Rx)	Total number of received RP data messages.
RP AcK (Rx)	Total number of received RP acknowledgement messages.
RP Error (Rx)	Total number of received RP error messages.
RP SMMA (Rx)	Total number of received RP SMMA messages.

Field	Description
RP Error Cause Statistics	The RP error message conveys the information that is sent between MS and the MSC in both directions. An RP error message comprises message type, message reference, and cause and user data. RP error cause statistics includes: • Unsigned number • Operator determined barring • Call barred • Reserved • SM transfer rejected • Destination out of order • Unidentified subscriber • Facility rejected • Unknown subscriber • Network out of order • Temporary failure • Congestion • Not subscribed • Not implemented • Interworking error • Resource unavailable
Unassigned Number (Tx)	Total number of errors caused due to un-signed or un-known number while transmitting the message from MS to network.
Operator Determined Barring (Tx)	Total number of errors caused due to operator determined barring while transmitting the message from MS to network.
Call Barred (Tx)	Total number of errors caused due to calls barred while transmitting the message from MS to network.
Reserved (Tx)	Total number of errors caused due to calls reserved while transmitting the message from MS to network.
SM Transfer Rejected (Tx)	Total number of errors caused due to Short Message (SM) transfer rejection while transmitting the message from MS to network.
Destination Out of Order (Tx)	Total number of errors caused due to destination out of order while transmitting the message from MS to network.
Unidentified Subscriber (Tx)	Total number of errors caused due to unidentified subscriber while transmitting the message from MS to network.
Facility Rejected (Tx)	Total number of errors caused due to rejection of the facility while transmitting the message from MS to network.
Unknown Subscriber (Tx)	Total number of errors caused due to un-known subscriber while transmitting the message from MS to network.
Network Out of Order (Tx)	Total number of errors caused due to un-availability of the network while transmitting the message from MS to network.

Field	Description
Temporary Failure (Tx)	Total number of errors caused due to temporary failure of the network while transmitting the message from MS to network.
Congestion (Tx)	Total number of errors caused due to congestion in the network while transmitting the message from MS to network.
Not Subscribed (Tx)	Total number of errors caused due to the status as not subscribed while transmitting the message from MS to network.
Not Implemented (Tx)	Total number of errors caused due to non-implementation while transmitting the message from MS to network.
Interworking Error (Tx)	Network interworking is required when for the service execution, a packet domain PLMN works with any other network. The interworking takes place mostly using Gi and Gp interfaces. Total number of errors caused due to interworking errors while transmitting the message from MS to network.
Resource Un-available (Tx)	Total number of errors caused due to unavailability of the resource while transmitting the message from MS to network.
Message Drop Counters	Number of RP layer messages that were dropped by the MS or network. The message drop counters are categorized as: • RP Data • RP Ack • RP Error • RP Decode Failure
RP Data	Total number of RP data messages that were dropped.
RP Ack	Total number of RP acknowledgement messages that were dropped.
RP Error	Total number of RP error messages that were dropped.
RP Decode Failures	Total number of RP decode failure messages that were dropped.

Field	Description
General Statistics	General statistical parameters related to SMS. Along with GMM interaction statistics parameters, It includes: • Concatenated MO SMS • CP Timer Expiry • TR1N Timer • TR2N Timer • CP Data Retransmissions • RP Msg Encode Fail • CP Data Tx Fail • CP Data Inv TID • Max Retransmissions Reached • SMSC Addr Restricted • MO SMSC Addr Restricted • MT SMSC Addr Restricted • CP-DATA No Cp Ack Rx
Concatenated MO SMS	Concatenated MO SMS specifies that the SMC has received the data (CP-Data) as well as associated acknowledgement (CP-Ack) messages. This parameter indicates the number of SMCs in such state.
TR1N timer	Specifies current status of TR1N timer. TR1N is a timer for Point to Point Short SMS Service (POPSMS). The timer is associated with the wait for RP acknowledgement message. Refer 3GPP TS 4.011 and 0.12 for more information.
TR2N Timer	Specifies current status of TR2N timer. TR2N timer is a timer for Point to Point Short Message Service (PPSMS). The timer is associated with wait to send for RP acknowledgment message. Refer 3GPP 4.0.11 and 0.12 for more information.
CP Data Retransmissions	Total number of Control Protocol data (CP-Data) messages that were re-transmitted between MS and network.
RP Message Encode Fail	Total number of messages with failed Short Message Rely Protocol (SM RP) encoding.
CP Data Inv TID	A Control Protocol (CP) message is composed of • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs) This specifies total number of errors due to invalid transaction identifier.
Max Retransmissions Reached	Total number of messages that have completed the maximum allowed retransmission attempts.
SMSC Addr Restricted	Total number of restricted Short Message Service Center (SMSC) addresses.
MO SMSC Addr Restricted	Total number of SMSC address restricted for the Mobile Originated (MO) messages, i.e. the messages that are being sent from MS to network.

Field	Description
MT SMSC Addr Restr.	Total number of SMSC address restricted for the Mobile Terminated(MT) messages, i.e. the messages that are being sent from network to MS.
GMM Interaction Stats	GMM interaction statistics comprises GPRS Mobility Management (GMM) entities in the network. IT can be used to track the subscriber location within the current or other PLMN. It includes: • Page Request Sent • Page Response Successful • Page Response Fail • Release Indication
Page Request Sent	The paging function is used by the network to retrieve the current cell information from an MS that is in the power saving mode. This is the total number of page requests sent by the network.
Page Response Successful.	Total number of success full responses, received by the network for the paging requests that were sent to the mobile stations in power saving mode.
Page Response Fail	Total number of response failures, received by the network for the paging requests that were sent to mobile stations in power saving mode.
Release Indication	GMM allows packet service continuity when the MS moves from one GPRS Location Area (LA) to another. MS as well as the network can use the IMSI detach procedure to remove the Mobility Management (MM) context when it is not required. These are the number of release indications transmitted between MS and network.
Release Indication Waiting (MO)	These are number of release indications waiting to be delivered for MO messages such as: • MO CP Ack • MO CP Data • MO CP ERR
MO CP Ack Delivery	Total number of release indications waiting to be transferred between network and MS for mobile originated control protocol acknowledgement messages that are being delivered.
MO CP Data Delivery	Total number of release indications waiting to be transferred between network and MS for mobile originated control protocol data messages that are being delivered.
MO CP ERR Delivery	Total number of release indications waiting to be transferred between network and MS for mobile originated control protocol error messages that are being delivered.
Release Indication Waiting (MT)	These are total number of release indications waiting to be delivered for MT messages such as: • MT GMM Connection • MT CP Data • MT CP Ack • MT CP ERR
MT GMM Connection	Total number of release indications waiting to be transferred between the network and MS for mobile terminated GPRS mobility management connections.
MT CP Data Delivery	Total number of release indications waiting to be transferred between network and MS for mobile terminated control protocol data messages that are being delivered.
MT CP Ack Delivery	Total number of release indications waiting to be transferred between network and MS for mobile terminated control protocol acknowledgement messages that are being delivered.

Field	Description
MT CP Err Delivery	Total number of release indications waiting to be transferred between the network and MS for mobile terminated control protocol error messages that are being delivered.
MT-SMS Failures	Mobile terminated SM S failure statistics specifies total number of SMS messages that failed to reach designated MS. The failure reasons can be: • IMSI record not found • Busy subscriber • Detached subscriber • MT queue full
IMSI Record not Found	Total number of SMS messages that failed to reach the MS due to unavailability of International Mobile Subscriber Identity record.
Busy Subscriber	Total number of SMS messages that failed to reach the MS due to busy status of the subscriber.
Detached Subscriber	Total number of SMS messages that failed to reach MS because the intended subscriber was detached.
MT Queue Full	Total number of SMS messages that failed to reach MS because the MT message queue was full.

show sms statistics name

Table 401. show subscribers sms statistics name Command Output Descriptions

Field	Description
Session statistics	Session statistics includes parameters related to SMS session between the MS and network. It includes parameters such as: • MO SMS (in progress) • MT SMS (in progress) • SMMA (in progress) • MO SMS (Attempted) • MT SMS (Attempted) • SMMA (Attempted) • MO SMS (successful) • MT SMS (successful) • SMMA (successful)
MO SMS (In progress)	Total number SMS messages that are Mobile Originated (MO) i.e. sent from an UE or MS and are being received by network.
MT SMS (In Progress)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are being delivered by network.
SMMA (In Progress)	Total number of SMMA messages in progress for the reception by the network. The SMMA message is used by the MS to indicate the network about the availability of the memory in MS, to receive one or more short messages.
MO SMS (Attempted)	Total number of SMS messages that are Mobile Originated (MO) i.e. sent from an UE or MS and are being attempted to be received by the network.
MT SMS (Attempted)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are being attempted to be delivered by the network.
SMMA (Attempted)	Total number of SMMA messages that the network has attempted to receive. The SMMA message is used by the MS to indicate the network about the availability of the memory in MS, to receive one or more short messages.
MO SMS (Successful)	Total number of SMS messages that are Mobile Originated (MO) i.e. being sent to the network by UE or MS and are successfully received by the network.
MT SMS (Successful)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are successfully delivered by the network.
SMMA (Successful)	Total of SMMA messages that are successfully received by the network. The SMMA message is used by the MS to indicate the network about the availability of the memory in MS, to receive one or more short messages.

Field	Description
Message Statistics	Message statistics comprises, received and transmitted data, acknowledgement and error messages between the MS and network for RP as well as CP layers along with the message drop counters. Message statistics includes, parameters related to: • CP layer messages • RP layer messages • Message drop counters
CP Layer Messages	Short Message Service Control Protocol (SM –CP) is used for communication by the SMC entities from MS and network. Following are components of CP layer messages: • CP Data: This message is sent between an MS and MSC in both directions. It contains the user data to be relayed between CM – users and associated parameters such as protocol discriminator, transaction identifier, message type and CP user data. • CP Ack: This message is sent between MS and MSC in both directions and is used to acknowledge the reception of a CP-Data message. It contains protocol discriminator, transaction identifier and message type. • CP Error: This message is sent between an MS and MSC in both directions and is used to convey the error information. It contains protocol discriminator, transaction identifier, message type and CP cause.
CP Data (Tx)	Total number of transmitted CP data messages.
CP Ack (Tx)	Total number of transmitted CP acknowledgement messages.
CP Error (Tx)	Total number of transmitted CP error messages.
CP Data (Rx)	Total number of received CP data messages.
CP Ack (Rx)	Total number of received CP acknowledgement messages.
CP Error (Rx)	Total number of received CP error messages.
Message Drop Counters	Message drop counter for CP layer comprises number of CP layer messages that were dropped by the MS or network. The message drop counters are categorized as: • CP Data • Retransmission Drops • Unknown TId Drops • CP Ack • CP Error
CP Data	Total number of CP data messages that were dropped.
Retransmission Drops	Total number of CP data re-transmission messages that were dropped.

Field	Description
Unknown Tld Drops	A Control Protocol message is composed of: • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs) This specifies total number of messages dropped due to unknown TID.
CP Ack	Total number of CP acknowledgement messages that were dropped.
CP Error	Total number of CP error messages that were dropped.
RP Layer Messages	Short Message Relay Protocol (SM-RP), that is used for communication between the SMR entities from MS and network. Following are the components of RP layer messages: • RP Data: This message is sent between MS and the MSC in both directions. It contains message type, message reference, originator address, destination address along with the user data. • RP Ack: This message sent between the MS and MSC in both directions. This message is used to relay the acknowledgement of received RP- data or RP-SMMA messages. It contains message type, message reference and user data. • RP –Error: This message is sent between the MS and the MSC in both directions and is used to relay the cause of erroneous short message or notification transfer attempt. It contains message type, message reference, and cause and user data.
RP Data (Tx)	Total number of transmitted RP data messages.
RP Ack (Tx)	Total number of transmitted RP acknowledge messages.
RP Error (Tx)	Total number of transmitted RP error messages.
RP Data (Rx)	Total number of received RP data messages.
RP Ack (Rx)	Total number of received RP acknowledgement messages.
RP Error (Rx)	Total number of received RP error messages.
RP SMMA (Rx)	Total number of received RP SMMA messages.
Message Drop Counters	Number of RP layer messages that were dropped by the MS or network. The message drop counters are categorized as: • RP Data • RP Ack • RP Error • RP Decode Failure
RP Data	Total number of RP data messages that were dropped.
RP Ack	Total number of RP acknowledgement messages that were dropped.
RP Error	Total number of RP error messages that were dropped.
RP Decode Failures	Total number of RP decode failure messages that were dropped.

Field	Description
General Statistics	General statistical parameters related to SMS. Along with GMM interaction statistics parameters, It includes: • Concatenated MO SMS • CP Timer Expiry • TR1N Timer • TR2N Timer • CP Data Retransmissions. • RP Msg Encode Fail • CP Data Tx Fail • CP Data Inv TID • Max Retransmissions Reached • SMSC Addr Restricted
Concatenated MO SMS	Concatenated MO SMS indicates that the SMC has received the data (CP-Data) as well as associated acknowledgement (CP-Ack) messages. This parameter indicates the number of SMCs in such state.
TR1N Timer	Specifies current status of TR1N timer. TR1N is a timer for Point to Point Short SMS Service (POPSMS). It is associated with the wait for RP acknowledgement message. Refer 3GPP TS 4.011 and 0.12 for more information.
TR2N Timer	Specifies current status of TR2N timer. TR2N timer is a timer for Point to Point Short Message Service (PPSMS). The timer is associated with wait to send for RP acknowledgement message. Refer 3GPP 4.0.11 and 0.12 for more information.
CP Data Retransmissions	Total number of Control Protocol data (CP-Data) messages that were re-transmitted between MS and network.
RP Message Encode Fail	Total number of messages with failed Short Message Rely Protocol (SM RP) encoding.
CP Data Tx Fail	Total number of errors due to transmission failure for the CP-data messages.
CP Data Inv TID	A Control Protocol message is composed of • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs) his specifies total number messages with invalid transaction identifier.
Max Retransmissions Reached	Total number of messages that have completed the maximum allowed retransmission attempts.
SMSC Addr Restricted	Total number of restricted Short Message Service Center (SMSC) addresses.

Field	Description
GMM Interaction Stats	GMM interaction statistics comprises GPRS Mobility Management (GMM) entities in the network. It includes: • Page Request Sent • Page Response Successful • Page Response Fail • Release Indication
Page Request Sent	The paging function is used by the network to retrieve the current cell information from an MS that is in the power saving mode. This is the total number of page requests sent by the network.
Page Response Successful	Total number of successful responses, received by the network for the paging requests that were sent to the mobile stations in power saving mode.
Page Response Fail	Total number of response failures, received by the network for the paging requests that were sent to mobile stations in power saving mode.
Release Indication	GMM allows packet service continuity when the MS moves from one GPRS Location Area (LA) to another. MS as well as the network can use the IMSI detach procedure to remove the Mobility Management (MM) context when it is not required. This specifies number of release indications transmitted between MS and network.

show sms statistics sgsn only verbose

Table 402. show subscribers sms statistics name Command Output Descriptions

Field	Description
Session Statistics	Session statistics includes parameters related to SMS session between the MS and network. It includes parameters such as: • MO SMS (in progress) • MT SMS (in progress) • MT SMS (in queue) • SMMA (in progress) • MO SMS (attempted) • MO SMS (successful) • MT SMS (attempted) • MT SMS (successful) • SMMA (Attempted) • SMMA (Successful)
MO SMS (In Progress)	Total number SMS messages that are Mobile Originated (MO) i.e. sent from an UE or MS and are being received by network.
MT SMS (In Progress)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are being delivered by network.
MT SMS (In Queue)	Total number of SMS messages that are mobile Terminated i.e. being sent to UE or MS and are in queue for being delivered by the network.
SMMA (In Progress)	Total number of SMMA messages in progress for the reception by the network. The SMMA message is used by the MS to indicate the network about the availability of the memory in MS, to receive one or more short messages.
MO SMS (Attempted)	Total number of SMS messages that are Mobile Originated (MO) i.e. sent from an UE or MS and are being attempted to be received by the network.
MO SMS (Successful)	Total number of SMS messages that are Mobile Originated (MO) i.e. being sent to the network by UE or MS and are successfully received by the network.
MT SMS (Attempted)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are being attempted to be delivered by the network.
MT SMS (Successful)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are successfully delivered by the network.
SMMA (Attempted)	Total number of SMMA messages that the network has attempted to receive. The SMMA message is used by the MS to indicate the network about the availability of the memory in MS, to receive one or more short messages.

Field	Description
SMMA (Successful)	Total number of SMMA messages that are successfully received by the network. The SMMA message is used by the MS to indicate the network about the availability of the memory in MS, to receive one or more short messages.
Message Statistics	Message statistics comprises, received and transmitted data, acknowledgement and error messages between the MS and network for RP as well as CP layers along with the message drop counters. It includes parameters related to: • CP layer messages • RP layer messages • Message drop counters
CP Layer Messages	Short Message Service Control Protocol (SM –CP) is used for communication by the SMC entities from MS and network. Following are components of CP layer messages: • CP Data: This message is sent between an MS and MSC in both directions. It contains the user data to be relayed between CM – users and associated parameters such as protocol discriminator, transaction identifier, message type and CP user data. • CP Ack: This message is sent between MS and MSC in both directions and is used to acknowledge the reception of a CP-Data message. It contains protocol discriminator, transaction identifier and message type. • CP Error: This message is sent between an MS and MSC in both directions and is used to convey the error information. It contains protocol discriminator, transaction identifier, message type and CP cause.
CP Data (Tx)	Total number of transmitted CP data messages.
CP Ack (Tx)	Total number of transmitted CP acknowledgement messages.
CP Error (Tx)	Total number of transmitted CP error messages.
CP Data (Rx)	Total number of received CP data messages.
CP Ack (Rx)	Total number of received CP acknowledgement messages.
CP Error (Rx)	Total number of received CP error messages.
CP Error Cause Stats	The CP error message that conveys error information that is sent between MS and MSC in both directions. It contains protocol discriminator, transaction identifier, message type and CP cause. CP error cause statistics includes: • Network failure • Congestion • Inlaid sematic • Invalid mandatory information • Invalid message type • Invalid protocol state • Invalid IE • Protocol error • Unidentified cause

Field	Description
Network Failure(Tx)	Total number of errors caused due to network failure while transmitting the message from network to MS.
Congestion(Tx)	Total number of errors caused due to congestion while transmitting the message from network to MS.
Inlaid Sematic (Tx)	Total number of errors caused due to invalid sematic while transmitting the message from network to MS.
Invalid Mandatory Info (Tx)	Total number of errors caused due to invalid mandatory information while transmitting the message from network to MS.
Invalid Message Type(Tx)	Total number of errors caused due to invalid schematic while transmitting the message from network to MS.
Invalid Protocol State(Tx)	Total number of errors caused due to invalid protocol state while transmitting the message from network to MS.
Invalid IE (Tx)	Total number of errors caused due to invalid Information Element (IE) while transmitting the message from network to MS.
Protocol Error (Tx)	Total number of errors caused due to protocol error while receiving the message the message from network to MS.
Undefined Cause (Tx)	Total number of errors caused due to unknown or un-defined cause while receiving the message from network to MS.
Network Failure(Rx)	Total number of errors caused due to network media failure while receiving the message from MS to network.
Congestion(Rx)	Total number of errors caused due to congestion while receiving the message from MS to network.
Inlaid Sematic(Rx)	Total number of errors caused due to invalid sematic while receiving the message from MS to network.
Invalid Mandatory Information (Rx)	Total number of errors caused due to invalid mandatory information while receiving the message from MS to network.
Invalid Message Type(Rx)	Total number of errors caused due to invalid message type while receiving the message from MS to network.
Invalid Protocol State(Rx)	Total number of errors caused due to invalid protocol state while receiving the message from MS to network.
Invalid IE (Rx)	Total number of errors caused due to invalid Information Element (IE) while receiving the message from MS to network.
Protocol Error (Rx)	Total number of errors caused due to protocol error while receiving the message the message from MS to network.
Undefined Cause (Rx)	Total number of errors caused due to unknown or un-defined cause while receiving the message from MS to network.

Field	Description
Message Drop Counters	Message drop counter for CP layer comprises number of CP layer messages that were dropped by the MS or network. The message drop counters are categorized as: • CP Data • Retransmission Drops • Unknown TId Drops • CP Ack • CP Error
CP Data	Total number of CP data messages that were dropped.
Retransmission Drops	Total number of CP data re-transmission messages that were dropped.
Unknown TId Drops	Control Protocol (CP) message is composed of • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs) This specifies total number of messages dropped due to unknown transaction identifier.
CP Ack	Total number of CP acknowledgement messages that were dropped.
CP Error	Total number of CP error messages that were dropped.
CP Error Drop for Invalid TId Received	Total number of CP error messages dropped due to reception of wrong or non-existent Transaction Identifier (TId).
RP Layer Messages	Short Message Relay Protocol (SM-RP), that is used for communication between the SMR entities from MS and network. Following are the components of RP layer messages: • RP Data: This message is sent between MS and the MSC in both directions. It contains message type, message reference, originator address, destination address along with the user data. • RP Ack: This message sent between the MS and MSC in both directions. This message is used to relay the acknowledgement of received RP- data or RP-SMMA messages. It contains message type, message reference and user data. • RP –Error: This message is sent between the MS and the MSC in both directions and is used to relay the cause of erroneous short message or notification transfer attempt. It contains message type, message reference, and cause and user data.
RP Data (Tx)	Total number of transmitted RP data messages.
RP AcK (Tx)	Total number of transmitted RP acknowledgement messages.
RP Error (Tx)	Total number of transmitted RP error messages.
RP Data (Rx)	Total number of received RP data messages.
RP Ack (Rx)	Total number of received RP acknowledgement messages.
RP Error (Rx)	Total number of received RP error messages.
RP SMMA (Rx)	Total number of received RP SMMA messages.

Field	Description
RP Error Cause Statistics	The RP error message conveys the information that is sent between MS and the MSC in both directions. An RP error message comprises message type, message reference, and cause and user data. RP error cause statistics includes: • Unsigned number • Operator determined barring • Call barred • Reserved • SM transfer rejected • Destination out of order • Unidentified subscriber • Facility rejected • Unknown subscriber • Network out of order • Temporary failure • Congestion • Not subscribed • Not implemented • Interworking error • Resource unavailable
Unassigned Number (Tx)	Total number of errors caused due to un-signed or un-known number while transmitting the message from MS to network.
Operator Determined Barring (Tx)	Total number of errors caused due to operator determined barring while transmitting the message from MS to network.
Call Barred (Tx)	Total number of errors caused due to calls barred while transmitting the message from MS to network.
Reserved (Tx)	Total number of errors caused due to calls reserved while transmitting the message from MS to network.
SM Transfer Rejected (Tx)	Total number of errors caused due to Short Message (SM) transfer rejection while transmitting the message from MS to network.
Destination Out of Order (Tx)	Total number of errors caused due to destination out of order while transmitting the message from MS to network.
Unidentified Subscriber (Tx)	Total number of errors caused due to destination out of order while transmitting the message from MS to network.
Facility Rejected (Tx)	Total number of errors caused due to rejection of the facility while transmitting the message from MS to network.
Unknown Subscriber (Tx)	Total number of errors caused due to un-known subscriber while transmitting the message from MS to network.
Network Out of Order (Tx)	Total number of errors caused due to un-availability of the network while transmitting the message from MS to network.

Field	Description
Temporary Failure (Tx)	Total number of errors caused due to temporary failure of the network while transmitting the message from MS to network.
Congestion (Tx)	Total number of errors caused due to congestion in the network while transmitting the message from MS to network.
Not Subscribed (Tx)	Total number of errors caused due to the status as not subscribed while transmitting the message from MS to network.
Not Implemented (Tx)	Total number of errors caused due to non-implementation while transmitting the message from MS to network.
Interworking Error (Tx)	Network interworking is required when for the service execution, a packet domain PLMN works with any other network. The interworking takes place mostly using Gi and Gp interfaces. Total number of errors caused due to interworking errors while transmitting the message from MS to network.
Resource Un-available (Tx)	Total number of errors caused due to unavailability of the resource while transmitting the message from MS to network.
Memory Capacity Exceeded	Total number of errors caused due to lack of storage capacity in the MS while receiving the message.
Invalid Reference Number (Tx)	Total number of errors caused due to wrong or non-existent reference number while transmitting the message.
Invalid Semantic (Tx)	Total number of errors caused due to wrong or non-existent semantic information while transmitting the message.
Invalid Mandatory Info (Tx)	Total number of errors caused due to non-semantic mandatory information while transmitting the message.
Invalid Message Type (Tx)	Total number of errors caused due to non-existent or non-implemented message type while transmitting the message.
Invalid Protocol State (Tx)	Total number of errors caused due to wrong or non-implemented protocol state used while transmitting the message.
Invalid IE (Tx)	Total number of errors caused due to wrong or un-implemented Information Element (IE) used while transmitting the message.
Protocol Error (Tx)	Total number of errors caused due to wrong or non-implemented protocol used while transmitting the message.
Invalid Reference Number (Rx)	Total number of errors caused due to wrong or non-existent reference number while receiving the message.
Invalid Semantic (Rx)	Total number of errors caused due to wrong or non-existent semantic information while receiving the message.
Invalid Mandatory Info (Rx)	Total number of errors caused due to invalid mandatory information while receiving the message.
Invalid Message Type (Rx)	Total number of errors caused due to non-existent or non-implemented message type while receiving the message.
Invalid Protocol State (Rx)	Total number of errors caused due to wrong or non-implemented protocol state used while receiving the message.

Field	Description
Invalid IE (Rx)	Total number of errors caused due to wrong or un-implemented Information Element (IE) used while receiving the message.
Protocol Error (Rx)	Total number of errors caused due to wrong or non-implemented protocol used while receiving the message.
Undefined Error (Rx)	Total number of errors caused due to unknown or un-defined cause while receiving the message.
Message Drop Counters	Message drop counter comprises RP layer messages that were dropped by the MS or network. The message drop counters are categorized as: • RP Data • RP Ack • RP Error • RP Decode Failure
RP Data	Total number of RP data messages that were dropped.
RP Ack	Total number of RP acknowledgement messages that were dropped.
RP Error	Total number of RP error messages that were dropped.
RP Decode Failures	Total number of RP decode failure messages that were dropped.
General Statistics	General statistics comprises statistical parameters related to SMS, along with GMM interaction statistics parameters, It includes: • Concatenated MO SMS • CP Timer Expiry • TR1N Timer • TR2N Timer • CP Data Retransmissions • RP Msg Encode Fail • CP Data Tx Fail • CP Data Inv TID • Max Retransmissions Reached • SMSC Addr Restricted • MO SMSC Addr Restricted • MT SMSC Addr Restricted
Concatenated MO SMS	Concatenated MO SMS indicates that the SMC has received the data (CP-Data) as well as associated acknowledgement (CP-Ack) messages. This parameter indicates the number of SMCs in such state.
TR1N timer	Specifies current status of TR1N timer. TR1N is a timer for Point to Point Short SMS Service (POPSMS). It is associated with the wait for RP acknowledgement message. Refer 3GPP TS 4.011 and 0.12 for more information.
TR2N Timer	Specifies current status of TR2N timer. TR2N timer is a timer for Point to Point Short Message Service (POPSMS). The timer is associated with wait to send for RP acknowledgement message. Refer 3GPP 4.0.11 and 0.12 for more information.

Field	Description
CP Data Retransmissions	Total number of Control Protocol data (CP-Data) messages that were re-transmitted between MS and network.
RP Message Encode Fail	Total number of messages with failed Short Message Rely Protocol (SM RP) encoding.
CP Data Inv TID	A Control Protocol message is composed of • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs)
Max Returns Reached	Total number of messages that have completed the maximum allowed retransmission attempts.
SMSC Addr Restricted	Total number of restricted Short Message Service Center (SMSC) addresses.
MO SMSC Addr Restr	Total number of SMSC address restricted for the Mobile Originated (MO) messages, i.e. the messages that are being sent from MS to network.
MT SMSC Addr Restr.	Total number of SMSC address restricted for the Mobile Terminated (MT) messages, i.e. the messages that are being sent from network to MS.
GMM Interaction Stats	GMM interaction statistics comprises GPRS Mobility Management (GMM) entitles in the network. It includes: • Page Request Sent • Page Response Successful • Page Response Fail • Release Indication
Page Request Sent	The paging function is used by the network to retrieve the current cell information from an MS that is in the power saving mode. This is the total number of page requests sent by the network.
Page Response Succ	Total number of success full responses, received by the network for the paging requests that were sent to the mobile stations in power saving mode.
Page Response Fail	Total number of response failures, received by the network for the paging requests that were sent to mobile stations in power saving mode.
Release Indication	GMM allows packet service continuity when the MS moves from one GPRS Location Area (LA) to another. MS as well as the network can use the IMSI detach procedure to remove the Mobility Management (MM) context when it is not required. This specifies number of release indications transmitted between MS and network.
Release Indication Waiting (MO)	These are total number of release indications waiting to be delivered for MO messages such as: • MO CP Ack • MO CP Data • MO CP ERR
MO CP Ack Delivery	Total number of release indications waiting to be transferred between network and MS for mobile originated control protocol acknowledgement messages that are being delivered.

Field	Description
MO CP Data Delivery	Total number of release indications waiting to be transferred between network and MS for mobile originated control protocol data messages that are being delivered.
MO CP ERR Delivery	Total number of release indications waiting to be transferred between network and MS for mobile originated control protocol error messages that are being delivered.
Release Indication Waiting (MT)	These are total number of release indications waiting to be delivered for MT messages such as • MT GMM Connection • MT CP Data • MT CP Ack • MT CP ERR
MT GMM Connection	Total number of release indications waiting to be transferred between the network and MS for mobile terminated GPRS mobility management connections.
MT CP Data Delivery	Total number of release indications waiting to be transferred between network and MS for mobile terminated control protocol data messages that are being delivered.
MT CP Ack Delivery	Total number of release indications waiting to be transferred between network and MS for mobile terminated control protocol acknowledgement messages that are being delivered.
MT CP Err Delivery	Total number of release indications waiting to be transferred between the network and MS for mobile terminated control protocol error messages that are being delivered.
MT-SMS Failures	Mobile terminated SMS failure statistics specifies total number of SMS messages that failed to reach designated MS. The failure reasons can be: • IMSI record not found • Busy subscriber • Detached subscriber • MT queue full
IMSI Record not Found	Total number of SMS messages that failed to reach the MS due to unavailability of International Mobile Subscriber Identity record.
Busy Subscriber	Total number of SMS messages that failed to reach the MS due to busy status of the subscriber.
Detached Subscriber	Total number of SMS messages that failed to reach MS because the intended subscriber was detached.
MT Queue Full	Total number of SMS messages that failed to reach MS because the MT message queue was full.

show sms statistics verbose

Table 403. show subscribers sms statistics name Command Output Descriptions

Field	Description
Session Statistics	Session statistics includes parameters related to SMS session between the MS and network. It includes parameters such as: • MO SMS (in progress) • MT SMS (in progress) • MT SMS (in queue) • SMMA (in progress) • MO SMS (attempted) • MT SMS (attempted) • MT SMS (successful) • SMMA (Successful)
MO SMS (In Progress)	Total number SMS messages that are Mobile Originated (MO) i.e. sent from an UE or MS and are being received by network.
MT SMS (In Progress)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are being delivered by network.
MT SMS (In Queue)	Total number of SMS messages that are mobile Terminated i.e. being sent to UE or MS and are in queue for being delivered by the network.
SMMA (In Progress)	Total number of SMMA messages in progress for the reception by the network. An SMMA message is used by the MS to indicate the network about the availability of the memory in MS, to receive one or more short messages.
MO SMS (Attempted)	Total number of SMS messages that are Mobile Originated (MO) i.e. sent from an UE or MS and are being attempted to be received by the network.
MT SMS (Attempted)	Total number of SMS messages that are Mobile Terminated i.e. being sent to a UE or MS and are being attempted to be delivered by the network.
MT SMS (Successful)	Total number of SMS messages that are Mobile Terminated (MT) i.e. being sent to a UE or MS and are successfully delivered by the network.
SMMA Successful	Total number of SMMA messages that are successfully received by the network. The SMMA message is used by the MS to indicate the network about the availability of the memory in MS, to receive one or more short messages.

Field	Description
Message Statistics	Message statistics comprises received and transmitted data, acknowledgement and error messages between the MS and network for RP as well as CP layers along with the message drop counters. Message statistics includes, parameters related to: • CP layer messages • RP layer messages • Message drop counters
CP Layer Messages	Short Message Service Control Protocol (SM –CP) is used for communication by the SMC entities from MS and network. Following are components of CP layer messages: • CP Data: This message is sent between an MS and MSC in both directions. It contains the user data to be relayed between CM – users and associated parameters such as protocol discriminator, transaction identifier, message type and CP user data. • CP Ack: This message is sent between MS and MSC in both directions and is used to acknowledge the reception of a CP-Data message. It contains protocol discriminator, transaction identifier and message type. • CP Error: This message is sent between an MS and MSC in both directions and is used to convey the error information. It contains protocol discriminator, transaction identifier, message type and CP cause.
CP Data (Tx)	Total number of transmitted CP data messages.
CP Ack (Tx)	Total number of transmitted CP acknowledgement messages.
CP Error (Tx)	Total number of transmitted CP error messages.
CP Data (Rx)	Total number of received CP data messages.
CP Ack (Rx)	Total number of received CP acknowledgement messages.
CP Error (Rx)	Total number of received CP error messages.
CP Error Cause Stats	The CP error message conveys error information that is sent between MS and MSC in both directions. It contains protocol discriminator, transaction identifier, message type and CP cause. CP error cause statistics includes: • Network failure • Congestion • Inlaid sematic • Invalid mandatory information • Invalid message type • Invalid protocol state • Invalid IE • Protocol error • Unidentified cause
Network Failure(Tx)	Total number of errors caused due to network failure while transmitting the message from network to MS.
Congestion(Tx)	Total number of errors caused due to congestion while transmitting the message from network to MS.

Field	Description
Inlaid Sematic(Tx)	Total number of errors caused due to invalid sematic while transmitting the message from network to MS.
Invalid Mandatory Info (Tx)	Total number of errors caused due to invalid mandatory information while transmitting the message from network to MS.
Invalid Message Type(Tx)	Total number of errors caused due to invalid schematic while transmitting the message from network to MS.
Invalid Protocol State(Tx)	Total number of errors caused due to invalid protocol state while transmitting the message from network to MS.
Invalid IE (Tx)	Total number of errors caused due to invalid Information Element(IE) while transmitting the message from network to MS.
Protocol Error (Tx)	Total number of errors caused due to protocol error while transmitting the message from network to MS.
Undefined Cause (Tx)	Total number of errors caused due to unknown or undefined causes while transmitting the message from network to MS.
Network Failure(Rx)	Total number of errors caused due to network media failure while receiving the message from MS to network.
Congestion (Rx)	Total number of errors caused due to congestion while receiving the message from MS to network.
Inlaid Sematic(Rx)	Total number of errors caused due to invalid sematic while receiving the message from MS to network.
Invalid Mandatory Info (Rx)	Total number of errors caused due to invalid mandatory information while receiving the message from MS to network.
Invalid Message Type (Rx)	Total number of errors caused due to invalid message type while receiving the message from MS to network.
Invalid Protocol State(Rx)	Total number of errors caused due to invalid protocol state while receiving the message from MS to network.
Invalid IE (Rx)	Total number of errors caused due to invalid Information Element(IE) while receiving the message from MS to network.
Protocol Error (Rx)	Total number of errors caused due to protocol error while receiving the message the message from MS to network.
Undefined Cause (Rx)	Total number of errors caused due to unknown or un-defined cause while receiving the message from MS to network.
Message Drop Counters	Message drop counter for CP layer comprises number of CP layer messages that were dropped by the MS or network. The message drop counters are categorized as: • CP Data • Retransmission Drops • Unknown TId Drops • CP Ack • CP Error
CP Data	Total number of CP data messages that were dropped.

Field	Description
Retransmission Drops	Total number of CP data re-transmission messages that were dropped.
Unknown TID Drops	A Control Protocol (CP) message is composed of: • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs) This specifies total number of messages that were dropped due to unknown transaction identifier.
CP Ack	Total number of CP acknowledgement messages that were dropped.
CP Error	Total number of CP error messages that were dropped.
CP–Error Drop for Invalid TID Recvd.	A Control Protocol message is composed of • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs) Specifies total number of CP error messages dropped due to reception of wrong or non-existent Transaction Identifier (TID).
RP Layer Messages	Short Message Relay Protocol (SM-RP), that is used for communication between the SMR entities from MS and network. Following are the components of RP layer messages: • RP Data: This message is sent between MS and the MSC in both directions. It contains message type, message reference, originator address, destination address along with the user data. • RP Ack: This message sent between the MS and MSC in both directions. This message is used to relay the acknowledgement of received RP- data or RP-SMMA messages. It contains message type, message reference and user data. • RP –Error: This message is sent between the MS and the MSC in both directions and is used to relay the cause of erroneous short message or notification transfer attempt. It contains message type, message reference, and cause and user data.
RP Data (Tx)	Total number of transmitted RP data messages.
RP Ack (Tx)	Total number of transmitted RP acknowledge messages.
RP Error (Tx)	Total number of transmitted RP error messages.
RP Data (Rx)	Total number of received RP data messages.
RP Ack (Rx)	Total number of received RP acknowledgement messages.
RP Error (Rx)	Total number of received RP error messages.
RP SMMA (Rx)	Total number of received RP SMMA messages.

Field	Description
RP Error Cause Statistics	The RP error message conveys the information that is sent between MS and the MSC in both directions. An RP error message comprises message type, message reference, and cause and user data. RP error cause statistics includes: • Unsigned number • Operator determined barring • Call barred • Reserved • SM transfer rejected • Destination out of order • Unidentified subscriber • Facility rejected • Unknown subscriber • Network out of order • Temporary failure • Congestion • Not subscribed • Not implemented • Interworking error • Resource unavailable
Unsigned Number (Tx)	Total number of errors caused due to un-signed or un-known number while transmitting the message from MS to network.
Opr. Determined Barring (Tx)	Total number of errors caused due to operator determined barring while transmitting the message from MS to network.
Call Barred (Tx)	Total number of errors caused due to calls barred while transmitting the message from MS to network.
Reserved (Tx)	Total number or errors caused due to calls reserved while transmitting the message from MS to network.
SM Transfer Rejected (Tx)	Total number of errors caused to Short Message (SM) transfer rejection while transmitting the message from MS to network.
Destination Out of Order (Tx)	Total number of errors caused due to destination out of order while transmitting the message from MS to network.
Unidentified Subscriber (Tx)	Total number of errors caused due to unidentified subscriber while transmitting the message form MS to network.
Network Out of Order (Tx)	Total number of errors caused due to un-availability of the network while transmitting the message from MS to network.
Temporary Failure (Tx)	Total number of errors caused due to temporary failure of the network while transmitting the message from MS to network.
Congestion (Tx)	Total number of errors caused due to congestion in the network while transmitting the message from MS to network.

Field	Description
Not Subscribed (Tx)	Total number of errors caused due to the status as not subscribed while transmitting the message from MS to network.
Not Implemented (Tx)	Total number of errors caused due to non-implementation while transmitting the message from MS to network.
Interworking Error (Tx)	Network interworking is required when for the service execution, a packet domain PLMN works with any other network. The interworking takes place mostly using Gi and Gp interfaces. Total number of errors caused due to interworking errors while transmitting the message from MS to network.
Resource Un-available (Tx)	Total number of errors caused due to un availability of the resource while transmitting the message from MS to network.
Memory Capacity Exceed	Total number of errors caused due to lack of storage capacity in the MS while receiving the message.
Invalid Reference Number (Tx)	Total number of errors caused due to wrong or non-existent reference number while transmitting the message.
Invalid Semantic (Tx)	Total number of errors caused due to wrong or non-existent semantic information while transmitting the message.
Invalid Mandatory Info (Tx)	Total number of errors caused due to non-semantic mandatory information while transmitting the message.
Invalid Message Type (Tx)	Total number of errors caused due to non-existent or non-implemented message type while transmitting the message.
Invalid Protocol State (Tx)	Total number of errors caused due to wrong or non-implemented protocol state used while transmitting the message.
Invalid IE (Tx)	Total number of errors caused due to wrong or un-implemented Information Element (IE) used while transmitting the message.
Protocol Error (Tx)	Total number of errors caused due to wrong or non-implemented protocol used while transmitting the message.
Undefined Error (Tx)	Total number of errors caused due to unknown or un-defined cause while transmitting the message.
Invalid Reference Number (Rx)	Total number of errors caused due to wrong or non-existent reference number while receiving the message.
Invalid Semantic (Rx)	Total number of errors caused due to wrong or non-existent semantic information while receiving the message.
Invalid Mandatory Info (Rx)	Total number of errors caused due to invalid mandatory information while receiving the message.
Invalid Message Type (Rx)	Total number of errors caused due to non-existent or non-implemented message type while receiving the message.
Invalid Protocol State (Rx)	Total number of errors caused due to wrong or non-implemented protocol state used while receiving the message.
Invalid IE (Rx)	Total number of errors caused due to wrong or un-implemented Information Element (IE) used while receiving the message.

Field	Description
Protocol Error (Rx)	Total number of errors caused due to wrong or non-implemented protocol used while receiving the message.
Undefined Error (Rx)	Total number of errors caused due to unknown or un-defined cause while receiving the message.
Message Droop Counters	Message drop counters comprises number of RP layer messages that were dropped by the MS or network. The message drop counters are categorized as: • RP Data • RP Ack • RP Error • RP Decode Failure
RP Data	Total number of RP data messages that were dropped.
RP Ack	Total number of RP acknowledgement messages that were dropped.
RP Error	Total number of RP error messages that were dropped.
RP Decode Failure	total number of RP decode failure messages that were dropped.
General Statistics	General statistics comprises statistical parameters related to SMS, along with GMM interaction statistics parameters, It includes: • Concatenated MO SMS • CP Timer Expiry • TR1N Timer • TR2N Timer • CP Data Retransmissions • RP Msg Encode Fail • CP Data Tx Fail • CP Data Inv TID • Max Retransmissions Reached • SMSC Addr Restricted • MO SMSC Addr Restricted • MT SMSC Addr Restricted • CP-DATA No Cp Ack Rx
Concatenated MO SMS	Connected MO SMS indicates that the SMC has received the data (CP-Data) as well as associated acknowledgement (CP-Ack) messages. This parameter indicates the number of SMCs in such state.
TR1N timer	Specifies current status of TR1N timer. TR1N is a timer for Point to Point Short SMS Service (POPSMS). It is associated with the wait for RP acknowledgement message. Refer 3GPP TS 4.011 and 0.12 for more information.
TR2N Timer	Specifies current status of TR2N timer. TR2N timer is a timer for Point to Point Short Message Service (PPSMS). The timer is associated with wait to send for RP acknowledgement message. Refer 3GPP 4.0.11 and 0.12 for more information.

Field	Description
CP Data Retransmissions	Total number of Control Protocol data (CP-Data) messages that were re-transmitted between MS and network.
RP Message Encode Fail	Total number of messages with failed Short Message Rely Protocol (SM RP) encoding.
CP Data Inv TID	A Control Protocol message is composed of • Protocol discriminator • Transaction Identifier • Message type • Other required Information Elements (IEs) This specifies total number messages with invalid transaction identifier.
Max Returns Reached	Total number of messages that have completed the maximum allowed retransmission attempts.
SMSC Addr Restricted	Total number of restricted Short Message Service Center (SMSC) addresses.
MO SMSC Addr Restricted	Total number of SMSC address restricted for the Mobile Originated (MO) messages, i.e. the messages that are being sent from MS to network.
MT SMSC Addr Restricted.	Total number of SMSC address restricted for the Mobile Terminated (MT) messages, i.e. the messages that are being sent from network to MS.
GMM Interaction Stats	GMM interaction statistics comprises GPRS Mobility Management (GMM) entities in the network. It includes: • Page Request Sent • Page Response Successful • Page Response Fail • Release Indication
Page Request Sent	The paging function is used by the network to retrieve the current cell information from an MS that is in the power saving mode. This is the total number of page requests sent by the network.
Page Response Successful	Total number of success full responses, received by the network for the paging requests that were sent to the mobile stations in power saving mode.
Page Response Fail	Total number of response failures, received by the network for the paging requests that were sent to mobile stations in power saving mode.
Release Indication	GMM allows packet service continuity when the MS moves from one GPRS Location Area (LA) to another. MS as well as the network can use the IMSI detach procedure to remove the Mobility Management (MM) context when it is not required. This specifies number of release indications transmitted between MS and network.
Release Indication Waiting (MO)	These are number of release indications waiting to be delivered for MO messages such as: • MOCP Ack • MOCP Data • MOCP ERR
MOCP Ack Delivery	Total number of release indications waiting to be transferred between network and MS for mobile originated control protocol acknowledgement messages that are being delivered.

Field	Description
MO CP Data Delivery	Total number of release indications waiting to be transferred between network and MS for mobile originated control protocol data messages that are being delivered.
MO CP ERR Delivery	Total number of release indications waiting to be transferred between network and MS for mobile originated control protocol error messages that are being delivered.
Release Indication Waiting (MT)	These are total number of release indications waiting to be delivered for MT messages such as: • MT GMM Connection • MT CP Data • MT CP Ack • MT CP ERR
MT GMM Connection	Total number of release indications waiting to be transferred between the network and MS for mobile terminated GPRS mobility management connections.
MT CP Data Delivery	Total number of release indications waiting to be transferred between network and MS for mobile terminated control protocol data messages that are being delivered.
MT CP Ack Delivery	Total number of release indications waiting to be transferred between network and MS for mobile terminated control protocol acknowledgement messages that are being delivered.
MT CP Err Delivery	Total number of release indications waiting to be transferred between the network and MS for mobile terminated control protocol error messages that are being delivered.
MT-SMS Failures	Mobile terminated SMS failure statistics specifies total number of SMS messages that failed to reach designated MS. The failure reasons can be: • IMSI record not found • Busy subscriber • Detached subscriber • MT queue full
IMSI Record not Found	Total number of SMS messages that failed to reach the MS due to unavailability of International Mobile Subscriber Identity record.
Busy Subscriber	Total number of SMS messages that failed to reach the MS due to busy status of the subscriber.
Detached Subscriber	Total number of SMS messages that failed to reach MS because the intended subscriber was detached.
MT Queue Full	Total number of SMS messages that failed to reach MS because the MT message queue was full.

Chapter 153

show sndcp statistics verbose

Table 404.show sndcp statistics verbose Command Output Descriptions

Field	Description
SND CP Data Statistics:	
Un-Acknowledged mode:	
SN-PDUs received	Description: This proprietary counter indicates the total number of SN-PDUs received by SND CP. Triggers: Increments when an SN-PDU is received by SND CP. Availability: per SGSN service
SN-PDU Bytes received	Description: This proprietary counter indicates the total number of SN-PDU bytes received by SND CP. Triggers: Increments when an SN-PDU is received by SND CP. Availability: per SGSN service
SN-PDUs dropped	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SND CP due to various reasons. Triggers: Increments when SN-PDUs are dropped at SND CP for various error cases as explained by the specific Drop reason counters below. Availability: per SGSN service
SN-PDU Bytes dropped	Description: This proprietary counter indicates the total number of SN-PDU bytes dropped at SND CP due to various reasons. Triggers: Increments when SN-PDUs are dropped at SND CP for various error cases as explained by the specific Drop reason counters below. Availability: per SGSN service
SN-PDU Drop Reason:	
Invalid SAPI State	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SND CP due to invalid SAPI state. Triggers: Increments when SN-PDUs are received in invalid SAPI state. Availability: per SGSN service
Invalid PDP Ctx	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SND CP due to invalid PDP context. Triggers: Increments when SN-PDUs are received by a non-existent PDP Context or non-existent subscriber. Availability: per SGSN service
Decode Failure	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SND CP due to decode failure. Triggers: Increments when Decode failures occur for SN-PDUs. Availability: per SGSN service
Reassembly Drops:	

Field	Description
Discard State	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SNDCP in discard state. Triggers: Increments when SN-PDUs are dropped and an unexpected segment is received to enter discard state. SNDCP entity expects either a first segment or subsequent segment. Reception of last segment clears this state. Availability: per SGSN service
Rx First Seg State	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SNDCP in Receive First Segment state. Triggers: In receive first segment state, only first segment of N-PDU is expected. If subsequent segmented is received, it is dropped with this reason and enters discard state. Availability: per SGSN service
Rx Subsequent Seg State	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SNDCP due to reassembly failure. Triggers: In receive subsequent segment state, only subsequent segments of N-PDU are expected. If first segment is received, it is dropped with this reason and enters discard state. Availability: per SGSN service
New First Segment	Description: This proprietary counter indicates the total number of buffered SN-PDUs dropped at SNDCP due to reception of new N-PDU. Triggers: Increments when reception of new N-PDU drops buffered SN-PDUs, if any with this reason. Availability: per SGSN service
Reassembly Failure	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SNDCP due to reassembly failure. Triggers: Increments when SN-PDUs are dropped at SNDCP due to reassembly failure. Availability: per SGSN service
Reassembly Timeout	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SNDCP due to reassembly timeout. Triggers: Increments when the buffered segments are dropped and the last segment is not received before reassembly timer expiry. Availability: per SGSN service
DCOMP Error	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SNDCP due to DCOMP (Data Compression algorithm ID) error. Triggers: Increments when SN-PDUs are received with invalid DCOMP value or DCOMP value different from that negotiated between MS and SGSN. Availability: per SGSN service
PCOMP Error	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SNDCP due to PCOMP (Protocol Header Compression algorithm ID). Triggers: Increments when SN-PDUs are received with invalid PCOMP value or PCOMP value different from that negotiated between MS and SGSN. Availability: per SGSN service
PDP Ctx Modified	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SNDCP due to PDP modification. Triggers: Increments when buffered data segments (SN-PDUs) are dropped during PDP context modification. Availability: per SGSN service

Field	Description
PDP Ctx Deleted	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SND CP due to PDP deletion. Triggers: Increments when buffered data segments (SN-PDUs) are dropped at SND CP due to PDP context deletion. Availability: per SGSN service
Other Reasons	Description: This proprietary counter indicates the total number of SN-PDUs dropped at SND CP due to any other reason than those mentioned above. Triggers: Increments when buffered data segments (SN-PDUs) are dropped at SND CP due to other reasons than those mentioned above. Availability: per SGSN service

Chapter 154

show snmp

This chapter describes the output of the **show snmp** command.

show snmp accesses

Table 405.show snmp accesses Command Output Descriptions

Field	Description
SNMP Usage Statistics:	
Get PDUs Received	The number of SNMP Get request packet data units (PDUs) received by the system from the SNMP alarm server.
GetNext PDUs Received	The number of SNMP GetNext request packet data units (PDUs) received by the system from the SNMP alarm server.
Set PDUs Received	The number of SNMP Set request packet data units (PDUs) received by the system from the SNMP alarm server.
PduTooBig Errors	The number of errors that occurred due to the packet data unit being received is too large.
NoSuchName Errors	The number of errors that occurred due to the packet data unit being requested not existing in the system. For example, this error would be generated if an SNMP "GET" request was received for an OID that doesn't exist in the system.
BadValue Errors	The number of errors that occurred due to the receipt of a bad value. For example, this error would be generated if an SNMP "SET" operation provides an illegal value.
GenError Errors	The number errors that occurred that could not be properly classified. For example, this error would be generated if the system receives a valid SNMP "GET" PDU requesting a piece of data about a card, however, the system experiences an internal error attempting to reach the card.
Agent started	The date and time when the SNMP agent was started.

show snmp notifies

Table 406. show snmp notifies Command Output Descriptions

Field	Description
SNMP Notification Statistics:	
Total number of notifications	The total number of notifications that have been sent to the SNMP alarm server since notification was enabled.
Last notification sent	The last date and time that a notification was sent to the SNMP alarm server.
Notification sending is	Indicates whether the sending of notifications is enabled or disabled on the system.
Notifications have never been disabled	Indicates whether or not the sending of SNMP notifications has ever been disabled.
Notifications in current period	The number of notifications that have been sent to the SNMP alarm server during the current monitor period.
Notifications in previous period	The number of notifications that have been sent to the SNMP alarm server during the previous monitor period.
Notification monitor period	The duration of the monitor period in seconds.
Total number of notifications Disabled	The total number of notifications disabled.

show snmp trap history

Table 407. show snmp trap history Command Output Descriptions

Field	Description
There are < > historical trap records (5000 maximum)	
Timestamp	Identifies the date and time the event trap was generated.
Trap Information	Shows the trap notification number and the associated device.

show snmp trap statistics

Table 408. show snmp trap statistics Command Output Descriptions

Field	Description
SNMP Notification Statistics:	
Total number of notifications	The total number of notifications sent to the SNMP alarm server since notification was enabled.
Last notification sent	The last date and time that a notification was sent to the SNMP alarm server.
Notification sending is	Indicates whether notification sending is enabled/disabled.
Notifications have never been disabled	Indicates whether notification sending was ever disabled.
Notifications in current period	The number of notifications that have been sent to the SNMP alarm server during the current monitor period.
Notifications in previous period	The number of notifications that have been sent to the SNMP alarm server during the previous monitor period.
Notification monitor period	The duration of the monitor period in seconds.
Trap Name	The trap name.
#Gen	The number of times notifications were generated for the trap.
#Disc	The disc number.
Last Generated	The last date and time that a notification generated.
Total number of notifications Disabled	The total number of notifications disabled.

Chapter 155

show srp

This chapter describes the outputs of the **show srp** command.

show srp checkpoint statistics

Table 409. show srp checkpoint statistics Command Output Descriptions

Field	Description
The following statistics indicates the state of session managers on the chassis. For ideal invocation of SRP procedures, the SessMgr state should *-Connected state.	
Number of Sessmgrs	Displays the total number of session managers
Sessmgrs in Active-Connected state	Displays the number of session managers in the active-connected state.
Sessmgrs in Standby-Connected state	Displays the number of session managers in the standby-connected state.
Sessmgrs in Pending-Active state	Displays the number of sessions managers in the pending-active state.
These statistics indicate the conversion status of checkpoint information on standby chassis.	
Current Call Recovery Records (CRRs)	Displays the number of current call recovery records.
Current pre-allocated calls	Displays the number of pre-allocated calls.
The following statistics are indicative of the status of various kinds of srp message exchanges between active and standby chassis.	
Total id-mapping checkpoint rcvd	Displays the total number of id-mapping checkpoints received by the chassis.
total APN id-mapping chkpnt rcvd	Displays the total number of APN id-mapping checkpoints received by the chassis.
Total sync rcvd	Displays the total number of sync messages received by the chassis.
Total sync-ack rcvd	Displays the total number of sync acknowledgement messages received by the chassis.
Total full session checkpoint rcvd	Displays the total number of complete session information checkpoints received by the chassis.
total nat-ips add rcvd	Displays the total number of NAT IP address additions received by the chassis.
total nat-ips delete rcvd	Displays the total number of NAT IP address deletions received by the chassis.
Total micro session checkpoint rcvd	Displays the total number of incremental micro session information checkpoints received.
total inv-err micro-chkpnt rcvd	Displays the total number of session teardown indication micro-checkpoints received.
total call-stats micro-chkpnt rcvd	Displays the total number of call statistics update micro-checkpoints received.
total nat-ips micro-chkpnt rcvd	Displays the total number of NAT-IP micro-checkpoints received at standby.
total nat-ips add rcvd	Displays the total number of NAT IP address additions received at standby.
total nat-ips delete rcvd	Displays the total number of NAT IP address deletions received at standby.
total nat-port micro-chkpnt rcvd	Displays the total number of NAT port micro-checkpoints received at standby.
total nat-bypass micro-chkpnt rcvd	Displays the total number of NAT-Bypass Micro-checkpoints received at standby.

Field	Description
total acs-sess-info micro-chkpnt rcvd	Displays the total number of Active Charging Service (ACS) session information Micro-checkpoints received.
total dyn-rule micro-chkpnt rcvd	Displays the total number of dynamic rules received and checkpointed to the standby chassis respectively.
total gx-li micro-chkpnt rcvd	Displays the total number of LI session information, as enabled from GX, received at standby counter.
Total Instance checkpoint rcvd	Displays the total number of PCRF-generated policy information as received session independent at standby.
total dyn-rule-instance micro-chkpnt rcvd	Displays the total number of session specific policy received counter.
total dyn-rule-instance delete micro-chkpnt rcvd	Displays the total number of session specific policy remove counter.
Total dyn-rule-instance ACK rcvd	Displays the total number of session independent information acknowledged from standby counter.
Total id-mapping checkpoint sent	Displays the total number of configuration specific id mapping for VPN/VRF context ids, service ids, and APN ids as sent to standby.
total APN id-mapping chkpt sent	Displays the total number of configuration specific id mapping for APN ids as sent to standby.
Total sync sent	Displays the total number of SYN message received counter.
Total sync-ack sent	Displays the total number of SYN Ack received counter.
Total full session checkpoint sent	Displays the total number of full session checkpoints sent by the chassis.
total nat-ip add sent	Displays the total number of NAT-IP add sent counter to standby.
Total full chkpt encoding failures	Displays the total number of complete session information formation failure counter primarily due to release of the session at active
Total micro session checkpoint sent	Displays the total number of micro session checkpoints sent by the chassis.
total inv-crr micro-chkpnt sent	Displays the total number of invalid CRR micro checkpoints sent.
total call-stats micro-chkpnt sent	Displays the total number of call statistics micro checkpoints sent.
total nat-ip micro-chkpnt sent	Displays the total number of NAT-IP Micro-checkpoint sent from active.
total nat-ip add sent	Displays the total number of NAT-IP address addition indications to standby.
total nat-ip delete sent	Displays the total number of NAT-IP address deletion indications to standby.
total nat-port micro-chkpnt sent	Displays the total number of NAT-Port Micro-checkpoint sent from active.
total nat-bypass micro-chkpnt sent	Displays the total number of NAT-Bypass Micro-checkpoint sent from active.
total acs-sess-info micro-chkpnt sent	Active Charging Service (ACS) specific session information as sent to standby.
total dyn-rule micro-chkpnt sent	Displays the total number of dynamic rules sent and checkpointed to the standby chassis respectively.

Field	Description
total gx-li micro-chkpnt sent	LI session information sent from active.
Total instance micro-chkpnt sent	PCRF generated policy information as sent session independent from active.
total dyn-rule-instance micro-chkpnt sent	Session specific policy add sent counter at active.
total dyn-rule-instance delete micro-chkpnt sent	Session specific policy remove sent counter from active.
Total dyn-rule-instance ACK sent	Session independent information acknowledgements sent from standby counter.
Total micro chkpnt encoding failures	Incremental session information failed to be sent due to bad encoding at active.
Total instance micro chkpnt encoding failures	PCRF generated policy encoding failed while being sent session independent from active.
Session full checkpoint never sent	Displays the number of calls which failed to send out complete session information.
Standby call pre-alloc failures	Displays the number of standby call pre allocation failures.
table-id mapping failures	Displays the number of table id mapping failures.
vpn-id mapping failures	Displays the number of decode failures due to not finding matching vpn information on standby.
svc-id mapping failures	Displays the number of decode failures due to not finding matching service information on standby.
ggsn-ntwk-id mapping failures	Displays the number of decode failures due to not finding matching ggsn network information on standby.
demux-mapping-id failures	Displays the number of decode failures due to not finding matching demux information on standby.
aaa session failures	Displays the number of AAA session failures.
recovery record alloc failures	Displays the number of recovery record allocation failures.
pre-allocate vpnmgr failure	Pre-allocation of call lines at standby failed due to VPN IP address allocation.
Ipv4 failure	Pre-allocation of call lines at standby failed due to VPN IPv4 address allocation.
Ipv4 Prefix failure	Pre-allocation of call lines at standby failed due to VPN IPv4 prefix address allocation.
Ipv6 failure	Pre-allocation of call lines at standby failed due to VPN IPv6 address allocation.
pre-allocate vpnmgr msg failure	Pre-allocation of call lines at standby failed due to VPN messaging issues.
pre-allocate demuxmgr failure	Pre-allocation of call lines at standby failed due to demux failure.
pre-allocate demuxmgr msg failure	Pre-allocation of call lines at standby failed due to demux messaging issues.
Standby micro-checkpoint failures	Displays the number of standby micro checkpoint failures.
recovery record not found	Displays the number of recovery records not found.
nat-ip uchkpt failed	The number of NAT IP micro-checkpoint failures.
nat-port uchkpt failed	The number of NAT port micro-checkpoint failures.

Field	Description
nat-bypass uchkpt failed	The number of NAT bypass micro-checkpoint failures.
The following are audit statistics done as part of switchover--conversion of session information failures as reported at standby going active.	
Total CRR recovery failures	Displays the total number of Call Recovery Record (CRR) call recovery failures.
audit-npumgr-failure	Audit of npumgr failures.
audit-npumgr-nat-flow-failure	Audit of npumgr NAT flow failures.
audit-npumgr-nat-bypass-flow-failure	Audit of npumgr NAT bypass flow failures.
audit-vpnmgr-failure	Audit of vpnmgr failures.
audit-vpnmgr-nat-ip-failure	Audit of vpnmgr NAT IP failures.
audit-demuxmgr-failure	Audit of demuxmgr failures for all demux managers.
audit-aaamgr-failure	Audit of aaamgr failures.
audit-ipsecmgr-failure	Audit of ipsecmgr failures.
audit-dgmbmgr-failure	Audit of dgmbmgr failures.
audit-mcast-proxy-failure	Audit of mcast proxy failures.
audit-igmp-proxy-failure	Audit of igmp proxy failures.
audit-unsupported-sess-type	Audit of unsupported session type failures.
recovery-unspecified-fail	The call recovery failed due to unspecified reason.
recovery-invalid-crr	The call recovery failed due to invalid CRR.
recovery-missing-info	The call recovery failed due to missing information.
recovery-quota-reached	The call recovery failed due to quota reached.
recovery-set-ac-sess-info-failure	The call recovery failed due to set ACS session information.
recovery-ac-sfw-policy-failure	The call recovery failed due to ACS SFW policy.
recovery-uchekpt-failure	The call recovery failed due to Micro-checkpoint.
recovery-service-not-found	The call recovery failed due to service not found.
recovery-restart-counter-mismatch	The call recovery failed due to restart counter mismatch.
recovery-aaa-sub-session-mismatch	The call recovery failed due to aaa sub session mismatch.
recovery-crr-no-aaa-session	The call recovery failed due to CRR no aaa session.
recovery-crr-aaa-session-not_found	The call recovery failed due to CRR aaa session not found.
recovery-flow-buffer-null	The call recovery failed due to flow buffer null.
recovery-invalid-flow-id	The call recovery failed due to invalid flow ID.
recovery-flow-id-in-use	The call recovery failed due to flow ID in use.

Field	Description
recovery-callline-alloc-failure	The call recovery failed due to callline allocation.
recovery-ipv6-session-alloc-failure	The call recovery failed due to IPv6 session allocation.
recovery-no-apn-group-stats-entry	The call recovery failed due to no APN group statistics.
recovery-apply-aaa-config-failure	The call recovery failed due to application of aaa configuration.
recovery-sub-session-alloc-failure	The call recovery failed due to sub session allocation.
recovery-nat-failure	The call recovery failed due to NAT.
recovery-set-dst-vpn-failure	The call recovery failed due to set destination VPN.
recovery-vpn-not-found	The call recovery failed due to VPN not found.
recovery-access-side-failure	The call recovery failed due to access side.
recovery-network-side-failure	The call recovery failed due to network side.
recovery-peer-callline-failure	The call recovery failed due to peer callline.
recovery-li-failure	The call recovery failed due to LI.
recovery-css-failure	The call recovery failed due to CSS.
recovery-uchkpt-alloc-failure	The call recovery failed due to Micro-checkpoint allocation.
recovery-acs-dyn-rule_failure	The call recovery failed due to ACS dynamic rule.
recovery-acs-acct-rule-failure	The call recovery failed due to ACS account rule.
recovery-prepaid-failure	The call recovery failed due to prepaid.
recovery-mipfa-failure	The call recovery failed due to mipfa.
call-recovery-stale-session	The call recovery failed due to stale session.
call-recovery-wrong-flow-type	The call recovery failed due to wrong flow type.
call-recovery-null-acct-session	The call recovery failed due to null account session.
call-recovery-wrong-acct-session-type	The call recovery failed due to wrong account session type.
NAT-NPU flow audit failures	The number of NAT NPU Flow audit failures.
NAT-IP Pool address audit failures	The number of NAT IP Flow audit failures.
NAT-Bypass flow audit failures	The number of NAT Bypass Flow audit failures.

show srp info

Table 410. show srp info Command Output Descriptions

Field	Description
Service Redundancy Protocol	
Context	Displays the srp context configured for service redundancy protocol. Only one context may be configured with this service.
Local Address	Displays the local address of the chassis.
Chassis State	Displays the chassis state (standby or active).
Chassis Mode	Displays the chassis mode (primary or backup).
Chassis Priority	Displays the chassis priority. The chassis priority is an integer that determines which chassis is in the active state. The lower number has a higher priority. The priority must be an integer from 1 through 255. Default is 125.
Local Tiebreaker	Displays the MAC address which is used to determine priority when both chassis have the same priority and route modifier. The lower MAC address has the higher priority.
Route-Modifier	Displays the modifier which is used to determine which chassis has priority. The lower the number the higher the priority.
Peer Remote Address	Displays the IP address of the remote peer.
Peer State	Displays whether the peer is in the active or standby state.
Peer Mode	Displays the peer mode (standby or active).
Peer Priority	Displays the peer priority (primary or backup).
Peer Tiebreaker	Displays the peer MAC address.
Peer Route-Modifier	Displays the peer's BGP route modifier.
Last Hello Message received	Displays a time stamp for the most recent hello message that was received.
Peer Configuration Validation	Displays the peer configuration validation.
Last Peer Configuration Error	Displays the most recent error that was received when the chassis was not able to validate its peer configuration.
Last Peer Configuration Event	Displays a time stamp for the last peer configuration event.
Last Validate Switchover Status	Displays whether both active and standby systems are ready for a planned srp switchover.
Connection State	Displays the status of the redundancy link between the two chassis.

show srp monitor

Table 411. show srp monitor Command Output Descriptions

Field	Description
Auth. probe monitor state	Displays the authentication probe monitor state (e.g., success).
Auth. probe monitors up	Displays the number of authentication probe monitors in the active state.
Auth. probe monitors down	Displays the number of authentication probe monitors in the inactive state.
Auth. probe monitors init	Displays the number of authentication probe monitors in the initialized state.
BFD monitor state	Displays the BFD monitor state (e.g., success).
BFD monitors up	Displays the number of BFD monitors in the active state.
BFD monitors down	Displays the number of BFD monitors in the inactive state.
BFD monitors init	Displays the number of BFD monitors in the initialized state.
BGP monitor state	Displays the BGP monitor state (e.g., success).
BGP monitors up	Displays the number of BGP monitors in the active state.
BGP monitors down	Displays the number of BGP monitors in the inactive state.
BGP monitors init	Displays the number of BGP monitors in the initialized state.
DIAMETER monitor state	Displays the Diameter monitor state (e.g., success).
DIAMETER monitors up	Displays the number of Diameter monitors in the active state.
DIAMETER monitors down	Displays the number of Diameter monitors in the inactive state.
DIAMETER monitors init	Displays the number of Diameter monitors in the initialized state.

show srp statistics

Table 412. show srp statistics Command Output Descriptions

Field	Description
Service Redundancy Protocol	
Peer Remote Address	The IP address for the redundant peer chassis.
Hello Messages Sent	The number of hello messages that were sent to the peer chassis.
Hello Message Received	The number of hello messages received from the peer chassis.
Hello Messages Discarded	The number of discarded hello messages.
Configuration Validation Messages Sent	The number of configuration validation messages sent to the peer.
Configuration Validation Message Received	The number of configuration validation messages received from the peer chassis.
Configuration Validation Messages Discarded	The number of discarded configuration validation messages.
Resource Messages Sent	The number of resource messages sent to the peer chassis.
Resource Messages Received	The number of resource messages received from the peer chassis.
Resource Messages Discarded	The number of discarded resource messages.
Switchover Req Messages Sent	The number of switchover request messages sent to the peer chassis.
Switchover Req Messages Received	The number of switchover request messages received from the peer chassis.
Switchover Rsp Messages Sent	The number of switchover response messages sent to the peer chassis.
Switchover Rsp Messages Received	The number of switchover response messages received from the peer chassis.
Switchover Messages Discarded	The number of discarded switchover messages.
Switchover Events	The number of switchover events, where one chassis went from active to inactive and the other chassis went from inactive to active.

Chapter 156

show ss7-routing-domain

This chapter describes the outputs of the `show ss7-routing-domain` command.

show ss7-routing-domain

Table 413. show ss7-routing-domain Command Output Descriptions

Field	Description
Peer Server Id	Indicates the peer server identifier.
Peer Server Process Id	Indicates the peer server process identifier.
Association State	Indicates the status of associated link.
Source Address	Indicates the IP address of source node/s.
Destination Address	Indicates the IP address of destination node/s.
Path Status	Indicates the status of established paths between source and destination node.

Chapter 157

show subscribers

This chapter includes the **show subscribers** command output tables.

show subscribers aaa-configuration

Table 414. show subscribers aaa-configuration Command Output Descriptions

Field	Description
Username	Specifies the name of the subscriber.
Status	Indicates the status of the subscriber’s session. The status can be Online or Offline and Active or Dormant.
Access Type	Indicates the type of access for this subscriber. The possible types are: • pdsn-simple-ip • pdsn-mobile-ip • ha-mobile-ip • ggsn-pdp-type-ipv4 • ggsn-pdp-type-ppp • lns-l2tp • ggsn-pdp-type-ipv6 • ha-ipsec • IPSG • asngw-simple-ip • asngw-mobile-ip • Unknown
Network Type	Displays the type of network connection for this subscribers session. The possible network types are: I: IP M: Mobile-IP L: L2TP P: Proxy-Mobile-IP i: IP-in-IP G: GRE V: IPv6-in-IPv4 S: IPSEC A: R4 (IP-GRE) u: Unknown

Field	Description
Access Tech	Represents the Access Technology . The possible technologies are: X : CDMA 1xRTT E : GPRS GERAN I : IP D : CDMA EV-DO U : WCDMA UTRAN W : Wireless LAN A : CDMA EV-DO RevA G : GPRS Other M : WiMAX C : CDMA Other N : GAN (Generic Access Network) H : HSPA (High Speed Packet Access) P : PDIF . : Other/Unknown
callid	Displays the subscriber's call identification number (callid).
msid	Displays the subscriber's mobile station identification (MSID).
imsi	Displays the subscriber's international mobile subscriber identity (IMSI).
AAA Information and Attributes	A list of AAA information attributes and their configuration for the specified session. For additional information on these attributes, refer to the <i>AAA and GTPP Interface Administration and Reference</i> .

show subscribers access-flows

Table 415. show subscribers access-flows Command Output Descriptions

Field	Description
Access-Tech	Indicates the session type for this subscriber. The possible types are: - X : CDMA 1xRTT - E : GPRS GERAN - I : IP - D : CDMA EV-DO - U : WCDMA UTRAN - W : Wireless LAN - A : CDMA EV-DO RevA - G : GPRS Other - M : WiMAX - C : CDMA Other - N : GAN (Generic Access Network) - H : HSPA (High Speed Packet Access) - P : PDIF - L : eHRPD - . : Other/Unknown
Type	Indicates the access flow type as one of the following: - Static - Dynamic - Pre-provisioned - Accounting
Direction	Indicates the flow direction as Forward/Uplink or Reverse/Downlink.
Link Status	Indicates the status of the flow as one of the following: - Online/Active - Dormant/idle - Not Applicable
Flow State	Indicates the state of the flow as Active or Inactive.
Flow Mapping	Indicates the mapping of the flow as one of the following: - Mapped - Unmapped - Not Applicable

Field	Description
Network Type	Indicates the session Network Type. The possible network types are: - I : IP - M : Mobile-IP - L : L2TP - P : Proxy-Mobile-IP - i : IP-in-IP - G : GRE - V : IPv6-in-IPv4 - S : IPSEC - A : R4 (IP-GRE) - u : Unknown
MSID	Displays the subscriber's mobile station identification (MSID).
ID	Indicates the unique identification number for the flow.
SRID	Indicates the service flow identifier for this subscriber.
PDFID	Indicates the packet data flow identifier for this subscriber.
PROFID	Indicates the QoS profile identifier for this subscriber.
PACKETS	Indicates the total number of packets processed for this flow.
BYTES	Indicates the total number of bytes processed for this flow.
POLICY	Indicates the name of the subscriber QoS policy applicable for this subscriber.

show subscribers access-flows full

Table 416. show subscribers access-flows full Command Output Descriptions

Field	Description
Username	Specifies the name of the subscriber.
callid	Displays the subscriber's call identification number (callid).
msid	Displays the subscriber's mobile station identification (MSID).
flow ID	Indicates the unique identification number for the flow.
Access Tech	Indicates the session type for this subscriber. The possible types are: - X : CDMA 1xRTT - E : GPRS GERAN - I : IP - D : CDMA EV-DO - U : WCDMA UTRAN - W : Wireless LAN - A : CDMA EV-DO RevA - G : GPRS Other - M : WiMAX - C : CDMA Other - N : GAN (Generic Access Network) - H : HSPA (High Speed Packet Access) - P : PDIF - L : eHRPD - . : Other/Unknown
Status	Indicates the status of the session as Active or Dormant/Idle.
Policy Name	Indicates the name of the QoS/subscriber policy.
Direction	Indicates the flow direction as Forward/Uplink or Reverse/Downlink.
State	Indicates the status of the flow as Active or Inactive.
Mapping Status	Indicates the mapping status of the flow as one of the following: - Mapped - Unmapped - Not Applicable
Flow Type	Indicates the access flow type as one of the following: - Accounting - Static - Dynamic - Pre-provisioned
Hdr Comp	Indicates the status of header compression.
QoS Traffic Policing	Indicates the status of the QoS traffic policing as Enabled or Disabled.
Data Statistics	Displays the data statistics.

Field	Description
Packets	Displays the total number of packets.
Bytes	Displays the total number of bytes.
pkts dropped tp	Displays the number of packets dropped by the traffic policy.
pkts dropped access-ctrl	Displays the number of packets dropped by the access control.
Requested QoS	Displays the requested QoS.
Profile Ids	Displays the profile IDs for the requested QoS.
QoS Id	Displays the applicable QoS identifier.
Granted QoS	Displays the granted QoS.
Global-Service-Class-Name	Specifies the global service class name.
Service-Class-Name	Specifies the local service class name.
Schedule Type	Displays the schedule type configured for the requested QoS. This group contains relevant parameters like, minimum reserved traffic rate, maximum latency allowed, polling interval, traffic priority, sustained traffic rate, and maximum traffic burst.
Classifiers	Displays the service classifier parameters like type of traffic, priority, matching protocol, source-destination IP address and ports, DSCP marking etc. It also shows the configured permit criteria for flows.
Data Path(s)	Displays the available information of data path(s).
Peer Address	Indicates the IP address of the trusted peer ASN GWs for inter ASN GW handovers in this service.
BS ID	Indicates the Base station Id.
Tunnel Endpoint	Indicates the IP address of GRE tunnel endpoint.
Gre Key	Indicates the GRE key for this data tunnel.
Type	Type of GRE data tunnel. It may be R4 or R6.
State	Indicates the status of access flow. Possible states are: - I : Initializing - F : Flow Added - A : Active - P : Pending
RecdPkts	Indicates the total number of packets received.
SendPkts	Indicates the total number of packets sent.
Total access-flows matching specified criteria	Displays the total number of matching access-flows.

show subscribers access-flows wf1

Table 417. show subscribers access-flows wf1 Command Output Descriptions

Field	Description
Access Tech	Indicates the session type for this subscriber. The possible types are: - X : CDMA 1xRTT - E : GPRS GERAN - I : IP - D : CDMA EV-DO - U : WCDMA UTRAN - W : Wireless LAN - A : CDMA EV-DO RevA - G : GPRS Other - M : WiMAX - C : CDMA Other - N : GAN (Generic Access Network) - H : HSPA (High Speed Packet Access) - P : PDIF - L : eHRPD - . : Other/Unknown
Policy Name	Indicates the name of the QoS/subscriber policy.
Type	Indicates the access flow type as one of the following: - A : Accounting - S : Static - D : Dynamic - P : Pre-provisioned
Direction	Indicates the flow direction as Forward/Uplink or Reverse/Downlink.
Link Status	Indicates the status of the link as one of the following: - A : Online/Active - D : Dormant - . : Not Applicable
Flow Status	Indicates the status of the flow as Active or Inactive.
Flow Mapping	Indicates the mapping status of the flow as one of the following: - M : Mapped - U : Unmapped - . : Not Applicable

Field	Description
Network Type	Indicates the network type as one of the following: - I: IP - M: Mobile-IP - L: L2TP - P: Proxy-Mobile-IP - i: IP-in-IP - G: GRE - V: IPv6-in-IPv4 - S: IPSEC - A: R4 (IP-GRE) - u: Unknown
MSID	Displays the subscriber's mobile station identification (MSID) number.
ID	Indicates the unique identification number for the flow.
SRID	Indicates the service request identification number for the flow.
PROFID	Indicates the profile identification number used by the flow.
SO	Displays the service option for each flow.
PACKETS	Indicates the total number of packets.
BYTES	Indicates the total number of bytes.
POLICY	Indicates the policy name used for the flow.
HDR-COMP	Indicates the ROHC header compression feedback channel identification number carried by the link.

show subscribers all

Table 418. show subscribers all Command Output Descriptions

Field	Description
vvvvv	Displays service and session state information. This column provides a code consisting of six characters.
Access Type	From left-to-right, the first character represents the Access Type that the subscriber is using. The possible access types are: - S: pdsn-simple-ip - M: pdsn-mobile-ip - H: ha-mobile-ip - P: ggsn-pdp-type-ppp - h: ha-ipsec - N: lns-l2tp - I: ggsn-pdp-type-ipv4 - A: asngw-simple-ip - G: IPSG - V: ggsn-pdp-type-ipv6 - B: asngw-mobile-ip - C: cscf-sip - s:sgsn - p:sgsn-pdp-type-ppp - 4:sgsn-pdp-type-ip - 6:sgsn-pdp-type-ipv6 - L: pdif-simple-ip - K: pdif-mobile-ip - x: S1-MME - F: standalone-fa

Field	Description
Access Type (cont.)	- J: asngw-non-anchor - e: ggsn-mbms-ue - i: asnpc - E: ha-mobile-ipv6 - X: HSGW - u: Unknown - R: gw-gtp-ipv4 - O: sgw-gtp-ipv6 - Q: sgw-gtp-ipv4-ipv6 - W: pgw-gtp-ipv4 - Y: pgw-gtp-ipv6 - Z: pgw-gtp-ipv4-ipv6 - @: saegw-gtp-ipv4 - #: saegw-gtp-ipv6 - \$: saegw-gtp-ipv4-ipv6 - 2: sgsn-pdp-type-ipv4-ipv6 - L: pdif-simple-ip - O: femto-ip - F: standalone-fa - U: pdg-ipsec-ipv4 - T: pdg-ssl - v: pdg-ipsec-ipv6 - f: hnbgw-hnb - g: hnbgw-iu - j: phsgw-non-anchor - c: phspc - k: PCC - n: ePDG - thenbgw-ue - mhenbgw-sg - Dbng-simple-ip - lpgw-pmip

Field	Description
Access Tech	From left-to-right, the second character represents the Access Technology. The possible call states are: - X: CDMA 1xRTT - E: GPRS GERAN - I: IP - D: CDMA EV-DO - U: WCDMA UTRAN - W: Wireless LAN - A: CDMA EV-DO RevA - G: GPRS Other - M: WiMAX - L: eHRPD - T: eUTRAN - C: CDMA Other - N: GAN (Generic Access Network) - H: HSPA (High Speed Packet Access) - P: PDIF - .: Other/Unknown - O: Femto IPsec - S: HSPA - B: PPPoE - F: FEMTO UTRAN
Call State	From left-to-right, the third character represents the Call State. The possible call states are: - C: Connected - r: CSCF-Registering - c: Connecting - d: Disconnecting - R: CSCF-Registered - U: CSCF-Unregistered - u: Unknown
Access CSCF	From left-to-right, the fourth character represents the Access CSCF Status of the session. The possible network types are: - A: Attached - C: Call (Unknown Type) - N: Not Attached - v: Voice Call - .: Not Applicable - V: Video Call
Link Status	From left-to-right, the fifth character represents the Link Status of the session. The possible idle states are: - A: Online/Active - D: Dormant/Idle

Field	Description
Network Type	From left-to-right, the sixth character represents the session Network Type. The possible network types are: - I: IP - M: Mobile-IP - L: L2TP - P: Proxy-Mobile-IP - i: IP-in-IP - G: GRE - V: IPv6-in-IPv4 - S: IPSEC - A: R4 (IP-GRE) - u: Unknown - T: IPv6 - C: GTP - W: PMIPv6(IPv4) - Y: PMIPv6(IPv4+IPv6) - R: IPv4+IPv6
CALLID	Displays the subscriber's call identification (callid) number.
MSID	Displays the subscriber's mobile station identification (MSID) number.
USERNAME	Displays the subscriber's username.
IP(*)	Displays the IP address assigned to the subscriber. (*) indicates the multiple hosts supported behind a primary node with primary IP address. Note that this is applicable to ASN GW session only.
TIME-IDLE	Displays the amount of time that the subscriber session has been idle either in an active or dormant state.

show subscribers asngw-only all

Table 419. show subscribers asngw-only all Command Output Descriptions

Field	Description
vvvvvv	Displays service and session state information. This column displays a code consisting of six characters. From left-to-right, the first character represents the Access Type that the subscriber is using. The possible access types are: - S: pdsn-simple-ip - M: pdsn-mobile-ip - H: ha-mobile-ip - P: ggsn-pdp-type-ppp - h: ha-ipsec - N: lns-l2tp - I: ggsn-pdp-type-ipv4 - A: asngw-simple-ip - G: IPSG - V: ggsn-pdp-type-ipv6 - B: asngw-mobile-ip - C: cscf-sip - L: pdif-simple-ip - K: pdif-mobile-ip - F: standalone-fa - J: asngw-non-anchor - u: Unknown

Field	Description
vvvvvv (cont.)	From left-to-right, the second character represents the Access Technology. The possible call states are: - X: CDMA 1xRTT - E: GPRS GERAN - I: IP - D: CDMA EV-DO - U: WCDMA UTRAN - W: Wireless LAN - A: CDMA EV-DO RevA - G: GPRS Other - M: WiMAX - C: CDMA Other - N: GAN (Generic Access Network) - H: HSPA (High Speed Packet Access) - P: PDIF - .: Other/Unknown From left-to-right, the third character represents the Call State. The possible call states are: - C: Connected - c: Connecting - d: Disconnecting - u: Unknown - r: CSCF-Registering - R: CSCF-Registered - U: CSCF-Unregistered From left-to-right, the fourth character represents the Access CSCF Status of the session. The possible states are: - A: Attached - N: Not Attached - .: Not Applicable
vvvvvv (cont.)	From left-to-right, the fifth character represents the Link Status of the session. The possible states are: - A: Online/Active (airlink connected) - D: Dormant (airlink not connected) From left-to-right, the sixth character represents the session Network Type. The possible network types are: - I: IP - M: Mobile-IP - L: L2TP - P: Proxy-Mobile-IP - i: IP-in-IP - G: GRE - V: IPv6-in-IPv4 - S: IPSEC - A: R4 (IP-GRE) - u: Unknown
CALLID	The subscriber's call identification (callid) number.
MSID	The subscriber's mobile station identification (MSID) number.
USERNAME	The subscriber's user name.
IP	The IP address assigned to the subscriber.

■ show subscribers asngw-only all

Field	Description
TIME-IDLE	The amount of time that the subscriber session has been idle either in an active or dormant state.
Total subscribers matching specified criteria	The total number of subscribers using firewall.

show subscribers asngw-service

Table 420. show subscribers asngw-service Command Output Descriptions

Field	Description
vvvvvv	Displays service and session state information. This column displays a code consisting of six characters. From left-to-right, the first character represents the Access Type that the subscriber is using. The possible access types are: - S: pdsn-simple-ip - M: pdsn-mobile-ip - H: ha-mobile-ip - P: ggsn-pdp-type-ppp - h: ha-ipsec - N: lns-l2tp - I: ggsn-pdp-type-ipv4 - A: asngw-simple-ip - G: IPSP - V: ggsn-pdp-type-ipv6 - B: asngw-mobile-ip - C: cscf-sip - L: pdif-simple-ip - K: pdif-mobile-ip - F: standalone-fa - J: asngw-non-anchor - u: Unknown

Field	Description
vvvvvv (<i>cont.</i>)	From left-to-right, the second character represents the Access Technology. The possible call states are: - X: CDMA 1xRTT - E: GPRS GERAN - I: IP - D: CDMA EV-DO - U: WCDMA UTRAN - W: Wireless LAN - A: CDMA EV-DO RevA - G: GPRS Other - M: WiMAX - C: CDMA Other - N: GAN (Generic Access Network) - H: HSPA (High Speed Packet Access) - P: PDIF - .: Other/Unknown From left-to-right, the third character represents the Call State. The possible call states are: - C: Connected - c: Connecting - d: Disconnecting - u: Unknown - r: CSCF-Registering - R: CSCF-Registered - U: CSCF-Unregistered From left-to-right, the fourth character represents the Access CSCF Status of the session. The possible states are: - A: Attached - N: Not Attached - .: Not Applicable
vvvvvv (<i>cont.</i>)	From left-to-right, the fifth character represents the Link Status of the session. The possible states are: - A: Online/Active (airlink connected) - D: Dormant (airlink not connected) From left-to-right, the sixth character represents the session Network Type. The possible network types are: - I: IP - M: Mobile-IP - L: L2TP - P: Proxy-Mobile-IP - i: IP-in-IP - G: GRE - V: IPv6-in-IPv4 - S: IPSec - A: R4 (IP-GRE) - u: Unknown
CALLID	The subscriber's call identification (callid) number.
MSID	The subscriber's mobile station identification (MSID) number.
USERNAME	The subscriber's user name.
IP	The IP address assigned to the subscriber.

Field	Description
TIME-IDLE	The amount of time that the subscriber session has been idle either in an active or dormant state.
Total subscribers matching specified criteria	The total number of subscribers using firewall.

show subscribers counters username

Table 421. show subscriber counters username Command Output Descriptions

Field	Description
Username	Specifies the name of the subscriber.
Status	Indicates the status of the subscriber's session. The status can be Online or Offline and Active or Dormant.
Access Type	Indicates the session type for this subscriber. The possible types are: - pdsn-simple-ip - pdsn-mobile-ip - ha-mobile-ip - ggsn-pdp-type-ppp - ha-ipsec - lns-l2tp - ggsn-pdp-type-ipv4 - asngw-simple-ip - IPSG - ggsn-pdp-type-ipv6 - asngw-mobile-ip
Access Type (cont.)	Indicates the access type for this subscriber. The possible types are: - cscf-sip - sgw-gtp-ipv4 - sgw-gtp-ipv6 - sgw-gtp-ipv4-ipv6 - pgw-gtp-ipv4 - pgw-gtp-ipv6 - pgw-gtp-ipv4-ipv6 - sgsn - sgsn-pdp-type-ppp - sgsn-pdp-type-ip - sgsn-pdp-type-ipv6 - pdif-simple-ip - pdif-mobile-ip - S1-MME - standalone-fa - asngw-non-anchor - ggsn-mbms-ue - asnpc - ha-mobile-ipv6 - HSGW - Unknown

Field	Description
Network Type	Indicates the network service used for the subscriber session. Possible values are: - I : IP - M : Mobile-IP - L : L2TP - P : Proxy-Mobile-IP - i : IP-in-IP - G : GRE - V : IPv6-in-IPv4 - S : IPSEC - A : R4 (IP-GRE) - u : Unknown
callid	Displays the subscriber's call identification number (callid).
msid	Displays the subscriber's mobile station identification (MSID).
input pkts	Indicates the number of packets received.
output pkts	Indicates the number of packets transmitted.
input bytes	Indicates the number of bytes received.
output bytes	Indicates the number of bytes transmitted.
input bytes dropped	Indicates the number of bytes that were dropped while receiving data for this subscriber session.
output bytes dropped	Indicates the number of bytes that were dropped while transmitting data for this subscriber session.
input pkts dropped	Indicates the number of packets that were dropped while receiving data for this subscriber session.
output pkts dropped	Indicates the number of packets that were dropped while transmitting data for this subscriber session. This field includes packets blocked by Access Control Lists (ACLs). Do not use this figure when computing the total number of output packets.
input pkts dropped due to zero mbr	Indicates the number of packets that were dropped while receiving data due to configured maximum bit rate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
output pkts dropped due to zero mbr	Indicates the number of packets that were dropped while transmitting data due to configured maximum bit rate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
pk rate from user(bps)	The peak data rate, in bits per second, obtained for data sent from the subscriber to the network during the last sampling period.
pk rate to user(bps)	The peak data rate, in bits per second, obtained for data received from the network by the subscriber during the last sampling period.
ave rate from user(bps)	The average data rate, in bits per second, obtained for data sent from the subscriber to the network during the last sampling period.
ave rate to user(bps)	The average data rate, in bits per second, obtained for data received from the network by the subscriber during the last sampling period.

Field	Description
sust rate from user(bps)	The mean data rate, in bits per second, obtained for data sent from the subscriber to the network during the last three sampling periods.
sust rate to user(bps)	The mean data rate, in bits per second, obtained for data received from the network by the subscriber during the last three sampling periods.
pk rate from user(pps)	The speed that packets are being received from the user in packets per second.
pk rate to user(pps)	The speed that packets are being sent to the user in packets per second.
ave rate from user(pps)	The average speed that packets are being received from the user in packets per second.
ave rate to user(pps)	The average speed that packets are being sent to the user in packets per second.
sust rate from user(pps)	The sustained speed that packets are being received from the user in packets per second.
sust rate to user(pps)	The sustained speed that packets are being sent to the user in packets per second.
link online/active percent	The percentage of time that the data link was online and active during the last sampling period.
ipv4 bad hdr	Indicates the number of IPv4 packets received with bad headers.
ipv4 ttl exceeded	Indicates the number of IPv4 packets dropped because their time-to-live was exceeded for this subscriber session.
ipv4 fragments sent	Indicates the number of IPv4 packet fragments that were transmitted.
ipv4 could not fragment	Indicates the number of IPv4 packets that could not be fragmented.
ipv4 inputacl drop	Indicates the number of IPv4 packets dropped due to an inbound access control list (ACL) violation. NOTE: This counter may increment even if no ACL is configured.
ipv4 outputacl drop	Indicates the number of IPv4 packets dropped due to an outbound access control list (ACL) violation.
ipv4 source violations	Indicates the number of IPv4 source validation violations.
ipv4 source violation no accounting	The IPv4 source validation violations that were detected but not included in the statistics.
ipv6 egress filtered	Enable IPv6 egress address filtering feature.
dormancy total	Indicates the total amount of time in seconds that the subscriber session was dormant over the duration of the session.
handoff total	The total number of subscriber sessions handed off.
ipv4 icmp packets dropped	When hide service address is enabled and a service in the system is sent ping packets or a traceroute is executed, the packets pertaining to the service address are dropped. This counter shows the number of those packets that have been dropped.
Total subscribers matching specified criteria	Displays the number of subscribers currently accessing the system that matched the criteria that was specified during the execution of this command.

show subscribers cscf-only full

Displays per-subscriber information for active sessions.

Table 422. show subscribers cscf-only full Command Output Descriptions

Field	Description
AoR	The address of record of the CSCF subscriber.
callid	The call ID of the active subscriber session.
Contact	The subscriber's contact information provided during registration.
Card/CPU	The slot and CPU number of the Processing Card through which the session is being processed.
Sessmgr Instance	The session manager instance the active subscriber session is using.
Active TCP Connections	(P-CSCF only) The total number of open TCP connections with subscribers.
Transport of Last Received Msg	The transport method used for the last received message. Possible transport methods used are TCP or UDP.
Registration expires after	The remaining duration of the subscriber registration.
State	The current state of the session.
Subscriber type	The subscriber type (home or visitor).
CSCF Service	The CSCF service the session is using.
CSCF Role	The role of the CSCF service.
Collapsed with access service	The access service with which the CSCF service is collapsed.
Access service callid	The call ID number of the access gateway integrated with the SCM.
AAA context	The AAA service to which the subscriber belongs.
AAA domain	The AAA domain to which the subscriber belongs.
AAA RADIUS group	The AAA RADIUS group to which the subscriber belongs.
RADIUS Auth Server IP	The RADIUS authentication server's IP address.
RADIUS Acct Server IP	The RADIUS accounting server's IP address. When the RADIUS Accounting Mediation Device is configured, this field will NOT display the RADIUS accounting mediation server's IP address.
DIAMETER Policy Server	The IP address of the Diameter policy server.

Field	Description
DIAMETER Policy Session-Id	The ID of Diameter Policy External Control Application (DPECA) session created by P-CSCF for every subscriber to subscribe to registration path signaling with PCRF. If the diameter subscription fails at PCRF, diameter Policy session ID will be displayed as N/A. NOTE: This field is applicable only for P-CSCF.
DIAMETER Policy Subscription	The status of DPECA subscription. NOTE: This field is applicable only for P-CSCF.
DIAMETER Acct Server	The IP address of the Diameter accounting server.
Charging Function Address	The IP address of the charging function server.
PCSCF Path	The node path to the registrar. A “Path” field is only used for REGISTER messages and 200OK responses to REGISTER messages. This field contains either IP-address:port or fully-qualified-domain-name:port.
SCSCF Service Route	The path to the service proxy as returned by the registrar upon successful registration. This field contains either IP-address:port or fully-qualified-domain-name:port.
Current CSCF sessions	The number of CSCF sessions the subscriber currently has running.
Registration Set All public URIs registered by the subscriber. It includes a public URI that the user explicitly registers as well as associated URIs that get implicitly registered for the user by the S-CSCF node. In addition, call features that a public URI is subscribed to are also shown below each URI.	
AoR	The address of record of the CSCF subscriber.
Display Name	The display name for the CSCF subscriber.
Loose Route	The loose route information for the CSCF subscriber.
Alias GroupId	Populated if alias indication feature is enabled on S-CSCF. HSS reports alias group ID.
Total PubUids	The total number of implicit registered users for the CSCF subscriber.
Shared IFC	Populated if Shared Initial Filter Criteria (SiFC) functionality is enabled on the CSCF.
Call Features Subscriber profile shows whether a subscriber has enabled local call features. Possible values are: - Disabled - Subscriber has disabled local call features; no associated local call features are displayed. - Enabled - Subscriber has enabled local call features; associated local call features are displayed.	
CID VSC OverRide	Indicates whether Caller ID Display Vertical Service Code Over Ride has been enabled (1) or disabled (0) by this subscriber.
CID	Indicates whether Caller ID Display has been enabled (1) or disabled (0) by this subscriber.
CIDB VSC OverRide	Indicates whether Caller ID Display Blocked Vertical Service Code Over Ride has been enabled (1) or disabled (0) by this subscriber.
CIDB	Indicates whether Caller ID Display Blocked has been enabled (1) or disabled (0) by this subscriber.
CW VSC OverRide	Indicates whether Call Waiting Vertical Service Code Over Ride has been enabled (1) or disabled (0) by this subscriber.

Field	Description
CW	Indicates whether Call Waiting has been enabled (1) or disabled (0) by this subscriber.
CT VSC OverRide	Indicates whether Call Transfer Vertical Service Code Over Ride has been enabled (1) or disabled (0) by this subscriber.
CT	Indicates whether Call Transfer has been enabled (1) or disabled (0) by this subscriber.
CFU VSC OverRide	Indicates whether Call Forward Unconditional Vertical Service Code Over Ride has been enabled (1) or disabled (0) by this subscriber.
CFU	Indicates whether or not Call Forward Unconditional is enabled for the subscriber's session. If not, None will be displayed.
CFNA VSC OverRide	Indicates whether Call Forward No Answer Vertical Service Code Over Ride has been enabled (1) or disabled (0) by this subscriber.
CFNA	Indicates whether or not Call Forward No Answer is enabled for the subscriber's session. If not, None will be displayed.
CFBL VSC OverRide	Indicates whether Call Forward Busy Line Vertical Service Code Over Ride has been enabled (1) or disabled (0) by this subscriber.
CFBL	Indicates whether or not Call Forward Busy Line is enabled for the subscriber's session. If not, None will be displayed.
CFNR VSC OverRide	Indicates whether Call Forward Not Registered Vertical Service Code Over Ride has been enabled (1) or disabled (0) by this subscriber.
CFNR	Indicates whether or not Call Forward Not Registered is enabled for the subscriber's session. If not, None will be displayed.
FollowMe VSC OverRide	Indicates whether Follow Me/Find Me Vertical Service Code Over Ride has been enabled (1) or disabled (0) by this subscriber.
FollowMe	Indicates whether or not Follow Me/Find Me is enabled for the subscriber's session. If not, None will be displayed.
Current CSCF Subscriptions	
Subscription id	The subscription ID.
Call-ID	The call identification number that uniquely identifies the subscriber.
Subscription Type	The subscription type.
Resource	The resource information.
Event Package	The associated event package. Possible event package types are: message-summary, presence, reg, and winfo.
Subscriber counters	
Call Attempts Tx	The total number of call attempts made by the subscriber for this session.
Call Attempts Rx	The total number of call attempts received by the subscriber for this session.
Call Successes Tx	The total number of calls successfully made by the subscriber for this session.
Call Successes Rx	The total number of successful calls received by the subscriber for this session.
Call Failures Tx	The total number of failed calls made by the subscriber for this session.

Field	Description
Call Failures Rx	The total number of call failures received by the subscriber for this session.
Call Release Attempts Tx	The total number of call release attempts made by the subscriber for this session.
Call Release Attempts Rx	The total number of call release attempts received by the subscriber for this session.
Call Release Successes Tx	The total number of call releases successfully made by the subscriber for this session.
Call Release Successes Rx	The total number of successful call releases received by the subscriber for this session.
Call Release Failures Tx	The total number of failed call releases made by the subscriber for this session.
Call Release Failures Rx	The total number of call release failures received by the subscriber for this session.
Subscription Attempts Tx	The total number of subscription attempts made by the subscriber for this session.
Subscription Attempts Rx	The total number of subscription attempts received by the subscriber for this session.
Subscription Successes Tx	The total number of subscriptions successfully made by the subscriber for this session.
Subscription Successes Rx	The total number of successful subscriptions received by the subscriber for this session.
Subscription Failures Tx	The total number of failed subscriptions made by the subscriber for this session.
Subscription Failures Rx	The total number of subscription failures received by the subscriber for this session.
Publish Attempts Tx	The total number of publish attempts made by the subscriber for this session.
Publish Attempts Rx	The total number of publish attempts received by the subscriber for this session.
Publish Successes Tx	The total number of publishes successfully made by the subscriber for this session.
Publish Successes Rx	The total number of successful publishes received by the subscriber for this session.
Publish Failures Tx	The total number of failed publishes made by the subscriber for this session.
Publish Failures Rx	The total number of publish failures received by the subscriber for this session.
Notification Attempts Tx	The total number of notification attempts made by the subscriber for this session.
Notification Attempts Rx	The total number of notification attempts received by the subscriber for this session.
Notification Successes Tx	The total number of notifications successfully made by the subscriber for this session.

Field	Description
Notification Successes Rx	The total number of successful notifications received by the subscriber for this session.
Notification Failures Tx	The total number of failed notifications made by the subscriber for this session.
Notification Failures Rx	The total number of notification failures received by the subscriber for this session.
Message Attempts Tx	The total number of message attempts made by the subscriber for this session.
Message Attempts Rx	The total number of message attempts received by the subscriber for this session.
Message Successes Tx	The total number of messages successfully made by the subscriber for this session.
Message Successes Rx	The total number of successful messages received by the subscriber for this session.
Message Failures Tx	The total number of failed messages made by the subscriber for this session.
Message Failures Rx	The total number of message failures received by the subscriber for this session.
Response 403 Tx	The total number of Response 403 transmitted.
Response 403 Rx	The total number of Response 403 received.
Response 408 Tx	The total number of Response 408 transmitted.
Response 408 Rx	The total number of Response 408 received.
Response 480 Tx	The total number of Response 480 transmitted.
Response 480 Rx	The total number of Response 480 received.
Response 481 Tx	The total number of Response 481 transmitted.
Response 481 Rx	The total number of Response 481 received.
Response 487 Tx	The total number of Response 487 transmitted.
Response 487 Rx	The total number of Response 487 received.
Response 488 Tx	The total number of Response 488 transmitted.
Response 488 Rx	The total number of Response 488 received.
Response 500 Tx	The total number of Response 500 transmitted.
Response 500 Rx	The total number of Response 500 received.
PDF Call Rejects	The total number of times the subscriber initiated a call through the P-CSCF but the policy decision function (PDF) rejected it.
Local Call Rejects	The total number of local call rejects (by the P-CSCF) for this subscriber.
Emergency Calls	The total number of emergency calls made by this subscriber during this session.
Operator-assistance Calls	The total number of operator-assisted calls made by this subscriber during this session.
Tollfree Calls	The total number of toll-free calls made by this subscriber during this session.

Field	Description
Directory-assistance Calls	The total number of directory assisted calls made by this subscriber during this session.
Premium Calls	The total number of premium service calls made by this subscriber during this session.
International Calls	The total number of international calls made by this subscriber during this session.
LongDistance Calls	The total number of long distance calls made by this subscriber during this session.
Session Timer Expires	The total number of session timer expirations occurring during this session.

show subscribers enodeb-address

Table 423. show subscribers enodeb-address Command Output Descriptions

Field	Description
vvvvv	Displays service and session state information. This column provides a code consisting of six characters.
Access Type	From left-to-right, the first character represents the Access Type that the subscriber is using. The possible access types are: (S) - pdsn-simple-ip (M) - pdsn-mobile-ip (H) - ha-mobile-ip (P) - ggsn-pdp-type-ppp (h) - ha-ipsec (N) - lns-l2tp (I) - ggsn-pdp-type-ipv4 (A) - asngw-simple-ip (G) - IPSG (V) - ggsn-pdp-type-ipv6 (B) - asngw-mobile-ip (C) - cscf-sip (z) - ggsn-pdp-type-ipv4v6 (R) - sgw-gtp-ipv4 (O) - sgw-gtp-ipv6 (Q) - sgw-gtp-ipv4-ipv6 (W) - pgw-gtp-ipv4 (Y) - pgw-gtp-ipv6 (Z) - pgw-gtp-ipv4-ipv6 (@) - saegw-gtp-ipv4 (#) - saegw-gtp-ipv6 (\$) - saegw-gtp-ipv4-ipv6 (p) - sgsn-pdp-type-ppp (s) - sgsn (4) - sgsn-pdp-type-ip (6) - sgsn-pdp-type-ipv6 (2) - sgsn-pdp-type-ipv4-ipv6 (L) - pdif-simple-ip (K) - pdif-mobile-ip (o) - femto-ip (F) - standalone-fa (J) - asngw-non-anchor

Field	Description
Access Type (<i>cont.</i>)	(e) - ggsn-mbms-ue (i) - asnpc (U) - pdg-ipsec-ipv4 (E) - ha-mobile-ipv6 (T) - pdg-ssl (v) - pdg-ipsec-ipv6 (f) - hnbgw-hnb (g) - hnbgw-iu (x) - s1-mme (a) - phsgw-simple-ip (b) - phsgw-mobile-ip (y) - asngw-auth-only (j) - phsgw-non-anchor (c) - phspc (k) - PCC (X) - HSGW (n) - ePDG (D) - bng-simple-ip (l) - pgw-pmip (u) - Unknown
Access Tech	From left-to-right, the second character represents the Access Technology. The possible call states are: (X) - CDMA 1xRTT (E) - GPRS GERAN (I) - IP (D) - CDMA EV-DO (U) - WCDMA UTRAN (W) - Wireless LAN (A) - CDMA EV-DO RevA (G) - GPRS Other (M) - WiMAX (C) - CDMA Other (N) - GAN (Generic Access Network) (O) - Femto IPsec (P) - PDIF (H) - HSPA (High Speed Packet Access) (L) - eHRPD (T) - eUTRAN (B) - PPPoE (F) - FEMTO UTRAN (H) - PHS (.) - Other/Unknown
Call State	From left-to-right, the third character represents the Call State. The possible call states are: C - Connected c - Connecting d - Disconnecting u - Unknown r - CSCF-Registering R - CSCF-Registered U - CSCF-Unregistered

Field	Description
Access CSCF	From left-to-right, the fourth character represents the Access CSCF Status of the session. The possible network types are: A - Attached N - Not Attached . - Not Applicable
Link Status	From left-to-right, the fifth character represents the Link Status of the session. The possible idle states are: A - Online/Active D - Dormant/Idle
Network Type	From left-to-right, the sixth character represents the session Network Type . The possible network types are: I - IP M - Mobile-IP L - L2TP P - Proxy-Mobile-IP i - IP-in-IP G - GRE V - IPv6-in-IPv4 S - IPSEC C - GTP A - R4 (IP-GRE) T - IPv6 u - Unknown W - PMIPv6(IPv4) Y - PMIPv6(IPv4+IPv6) R - IPv4+IPv6 v - PMIPv6(IPv6)
CALLID	Displays the subscriber's call identification (callid) number.
MSID	Displays the subscriber's mobile station identification (MSID) number.
USERNAME	Displays the subscriber's username.
IP	Displays the IP address assigned to the subscriber.
TIME-IDLE	Displays the amount of time that the subscriber session has been idle either in an active or dormant state.

show subscribers firewall required

Table 424.show subscribers firewall required Command Output Descriptions

Field	Description
vvvvvv	Displays service and session state information. This column provides a code consisting of six characters. From left-to-right, the first character represents the Access Type that the subscriber is using. The possible access types are: - S: pdsn-simple-ip - M: pdsn-mobile-ip - H: ha-mobile-ip - I: ggsn-pdp-type-ip - A: asngw-simple-ip - G: IPSG - p: sgsn-pdp-type-ppp - 4: sgsn-pdp-type-ip - s: sgsn - P: ggsn-pdp-type-ppp - L: pdif-simple-ip - K: pdif-mobile-ip - B: asngw-mobile-ip - F: standalone-fa - C: cscf-sip - J: asngw-non-anchor - I: asnpc - u: Unknown

Field	Description
vvvvvvv (<i>cont.</i>)	From left-to-right, the second character represents the Access Technology. The possible call states are: - X: CDMA 1xRTT - E: GPRS GERAN - I: IP - D: CDMA EV-DO - U: WCDMA UTRAN - W: Wireless LAN - A: CDMA EV-DO RevA - G: GPRS Other - M: WiMAX - C: CDMA Other - N: GAN (Generic Access Network) - H: HSPA (High Speed Packet Access) - P: PDIF - . : Other/Unknown From left-to-right, the third character represents the Call State. The possible call states are: - r: CSCF-Registering - C: Connected - c: Connecting - R: CSCF-Registered - d: Disconnecting - u: Unknown - U: CSCF-Unregistered From left-to-right, the fourth character represents the Access CSCF Status of the session. The possible network types are: - A: Attached - N: Not Attached - . : Not Applicable
vvvvvvv (<i>cont.</i>)	From left-to-right, the fifth character represents the Link Status of the session. The possible idle states are: - A: Online/Active - D: Dormant/Idle From left-to-right, the sixth character represents the session Network Type. The possible network types are: - I: IP - M: Mobile-IP - L: L2TP - P: Proxy-Mobile-IP - i: IP-in-IP - G: GRE - S: IPSEC - u: Unknown - A: R4 (IP-GRE)
CALLID	Displays the subscriber's call identification (callid) number.
MSID	Displays the subscriber's mobile station identification (MSID) number.
USERNAME	Displays the subscriber's username.
IP	Displays the IP address assigned to the subscriber.

■ show subscribers firewall required

Field	Description
TIME-IDLE	Displays the amount of time that the subscriber session has been idle either in an active or dormant state.
Total subscribers matching specified criteria	Total number of subscribers with firewall enabled.

show subscribers full

Table 425. show subscribers full Command Output Descriptions

Field	Description
Username	The subscriber name.
Status	Indicates the session status.
Access Type	Indicates the session type for this subscriber. The possible access types are: - pdsn-simple-ip - pdsn-mobile-ip - ha-mobile-ip - ggsn-pdp-type-ppp - ha-ipsec - lns-l2tp - ggsn-pdp-type-ipv4 - asngw-simple-ip - IPSG - ggsn-pdp-type-ipv6 - asngw-mobile-ip - cscf-sip - sgw-gtp-ipv4 - sgw-gtp-ipv6 - sgw-gtp-ipv4-ipv6 - pgw-gtp-ipv4 - pgw-gtp-ipv6 - pgw-gtp-ipv4-ipv6 - sgsn - sgsn-pdp-type-ppp - sgsn-pdp-type-ip - sgsn-pdp-type-ipv6
Access Type (cont.)	- pdif-simple-ip - pdif-mobile-ip - pdg-direct-ip - pdg-ttg - femto-ip - S1-MME - standalone-fa - asngw-non-anchor - ggsn-mbms-ue - asnpc - ha-mobile-ipv6 - HSGW - Unknown
Network Type	Indicates the network service used for the subscriber session.
Access Tech	Indicates the accessing technology.
callid	The subscriber's call identification number (callid).

Field	Description
msid	The subscriber's mobile station identification (MSID).
EAP-TYPE	The Extensible Authentication Protocol type.
Card/Cpu	The card and CPU ID.
Sessmgr Instance	The session manager instances.
state	The session state. The possible values are: - Connected - Connecting - Disconnecting - Unknown
PCF address	IP address of the PCF.
Peer address	IP address of peer system in network.
BS/PA address	Indicates the IP address of base station or paging agent.
idle time	The time period that the subscriber session has been idle, either in an active or dormant state.
idle time left	The idle time period left before timeout.
session time left	The session time left for the subscriber.
long duration time left	Indicates how much time is left for the maximum duration of a specified subscriber session.
long duration action	The setting for the action to take when the long duration timer expires. The possible values are: - Detection - Detect and send SNMP trap and CORBA notification only. - Disconnection - Disconnect the session and send SNMP trap and CORBA notification.
context-retention timer running	Indicates whether context-retention timer is running.
context-retention time left	Indicates time remaining.
always on	Session Update message was sent to the PCF to notify the PCF that the subscriber has the Always On feature enabled.
ip address	Indicates the primary IP address of the subscriber interface in the session. In WiMAX session this is the primary IP address of WiMAX CPE, if multiple host support enabled.
Multiple Hosts	Specifies the multiple IP host support enabled or disabled for a WiMAX session. It also indicates the connected hosts behind a WiMAX CPE and their allocated IP address with secondary IP pool name.
home-agent	The name of the HA for this subscriber.
fa-service-name	The name of the FA service for this subscriber.
ip pool name	The IP address pool or group to use for subscriber IP address allocation.
local ip addr	The local IP address of the interface in the session.
source context	The name of a configured source context from which the subscriber initiates a session.
destination context	The name of a configured destination context through which the subscriber is provided access to the packet data network.

Field	Description
ip header compression	The header compression method being used.
ROHC cid-mode (local/remote)	Robust Header Compression mode for the bi-directional channel -- [small large na].
ROHC max-cid (local/remote)	For Robust Header Compression, indicates the maximum value of a context identifier.
ROHC mrru (local/remote)	For Robust Header Compression, indicates the maximum reconstructed reception unit.
ROHC max-hdr (local/remote)	For Robust Header Compression, the largest header size in octets that may be compressed.
ROHC profile	Robust Header Compression profile ID as per RFC3095 for the bi-directional channel.
AAA context	The context in which the AAA service is configured.
AAA domain	The domain in which the AAA service is configured.
AAA start count	The number of accounting start messages sent to the accounting server for the subscriber session.
AAA stop count	The number of accounting stop messages sent to the accounting server for the subscriber session.
AAA interim count	The number of accounting interim messages sent to the accounting server for the subscriber session.
Acct-session-id	Identifies a subscriber session or PDP context.
AAA RADIUS group	The AAA RADIUS server group assigned to specific subscriber for AAA functionality.
AAA RADIUS Secondary group	If the secondary Accounting group is configured in the Subscriber configuration, this field displays the corresponding group name. Otherwise, it displays <i>n/a</i> .
RADIUS Auth Server IP	The RADIUS authentication server's IP address.
RADIUS Acct Server IP	The RADIUS accounting server's IP address. When the RADIUS Accounting Mediation Device is configured, this field will <u>not</u> display the RADIUS accounting mediation server's IP address.
NAS IP Address	The Network Access Server's (NAS) IP address.
Nexthop IP Address	The IP address of configured next-hop-forwarding-address in RADIUS attribute, subscriber configuration, or IP pool configuration.
GTPP Group	Displays all the configured GTPP server groups associated with this APN. NOTE: This field only appears if the Accounting Mode is GTPP.
Acct Context	Specifies the name of all configured GTPP accounting contexts associated with this APN. NOTE: This field only appears if the Accounting Mode is GTPP.
Authentication Mode	The authentication mode. Possible modes are: - None - User (Single EAP) - Device (Single EAP) - Device-User (Double EAP) - Device-User (Single EAP)
Authentication Type	The authentication type.

Field	Description
EAP-Type	The type of EAP authentication. Possible types are: • EAP-Pre-shared Key (EAP-PSK) • EAP-Transport Layer Security (EAP-TLS) • EAP-Tunneled Transport Layer Security (EAP-TTLS) • EAP-Authentication and Key Agreement (EAP-AKA)
Client Type	The type of client, which can be Regular or Data. Identifies whether the client is a regular client, which includes voice, or a data client, which is data only.
active input acl	The active Access Control List (ACL) for input.
active output acl	The active Access Control List (ACL) for output.
ECS Rulebase	The rulebase applicable for this subscriber when Enhanced Charging Service/Active Charging Service is enabled.
CBB-Policy	The CBB policy associated with the subscriber.
Bandwidth-Policy	The bandwidth policy associated with the subscriber.
Firewall-and-NAT Policy	Displays the Firewall-and-NAT policy name.
Firewall Policy IPv4	Indicates whether IPv4 firewall is enabled for the subscriber.
Firewall Policy IPv6	Indicates whether IPv6 firewall is enabled for the subscriber.
NAT Policy	Indicates whether NAT is enabled for the subscriber.
NAT Realm	The NAT realms associated with the subscriber.
NAT IP address	The NAT IP address allocated from the NAT realm.
(on-demand/not-on-demand)	If the NAT realm type is “on-demand” (where NAT IP allocation happens when the very first packet is received from the subscriber for that realm) it is indicated.
(<pool_name>)	If a NAT IP pool group is used, it indicates the NAT pool from which the IP is allocated.
Nat port chunks allocated[start -end]	The NAT port range allocated to the subscriber.
CF Policy ID	The Category-based Content Filtering Policy ID associated with the subscriber.
TPO Policy	The Traffic Performance Optimization (TPO) policy associated with the subscriber.
active input pley grp	The active input policy group for traffic flow.
active output pley grp	The active output policy group for traffic flow.
MIPFA Sessions	The status of Mobile IP FA sessions.
Layer 3 tunneling	Indicates if Layer 3 tunneling is enabled.
dhcp-service name	The DHCP service name.
dhcp-server address	The DHCP server address.
prepaid status	Indicates if prepaid status is on or off.

Field	Description
external inline srvr processing	Indicates if external inline server processing is on or off.
Proxy DNS Intercept List	The proxy DNS intercept list used for the subscriber.
access-link ip-frag	Configures IP fragmentation processing over the Access-link.
ignore DF-bit data-tunnel	Indicates if whether during Mobile IP tunneling, the DF bit is not ignored and packets are not fragmented.
MIP grat-ARP mode	Indicates if gratuitous ARPs are sent out for an HA session upon handoff and renewal requests.
Downlink traffic-policing	Indicates if traffic policing is enabled for the downlink direction.
Uplink traffic-policing	Indicates if traffic policing is enabled for the uplink direction.
Downlink traffic-shaping	Indicates if traffic shaping is enabled for downlink direction.
Uplink traffic-shaping	Indicates if traffic shaping is enabled for uplink direction.
Radius Accounting Mode	Indicates if the RADIUS accounting mode is either session-based or access-flow-based.
cscf-service name	The CSCF service name.
cscf registration AoR	The CSCF registered AoR.
input pkts	Indicates the number of packets received.
output pkts	Indicates the number of packets transmitted.
input bytes	Indicates the number of bytes received.
output bytes	Indicates the number of bytes transmitted.
input bytes dropped	Indicates the number of bytes that were dropped while receiving data for this subscriber session.
output bytes dropped	Indicates the number of bytes that were dropped while transmitting data for this subscriber session.
input pkts dropped	Indicates the number of packets that were dropped while receiving data for this subscriber session.
output pkts dropped	Indicates the number of packets that were dropped while transmitting data for this subscriber session. This field includes packets blocked by Access Control Lists (ACLs). Do not use this figure when computing the total number of output packets.
input pkts dropped due to zero mbr	Indicates the number of packets that were dropped while receiving data due to configured maximum bit rate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
output pkts dropped due to zero mbr	Indicates the number of packets that were dropped while transmitting data due to configured maximum bit rate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
pk rate from user(bps)	The peak data rate, in bits per second, obtained for data sent from the subscriber to the network during the last sampling period.

Field	Description
pk rate to user(bps)	The peak data rate, in bits per second, obtained for data received from the network by the subscriber during the last sampling period.
ave rate from user(bps)	The average data rate, in bits per second, obtained for data sent from the subscriber to the network during the last sampling period.
ave rate to user(bps)	The average data rate, in bits per second, obtained for data received from the network by the subscriber during the last sampling period.
sust rate from user(bps)	The mean data rate, in bits per second, obtained for data sent from the subscriber to the network during the last three sampling periods.
sust rate to user(bps)	The mean data rate, in bits per second, obtained for data received from the network by the subscriber during the last three sampling periods.
pk rate from user(pps)	The peak data rate, in packets per second, obtained for data sent from the subscriber to the network during the last sampling period.
pk rate to user(pps)	The peak data rate, in packets per second, obtained for data received from the network by the subscriber during the last sampling period.
ave rate from user(pps)	The average data rate, in packets per second, obtained for data sent from the subscriber to the network during the last sampling period.
ave rate to user(pps)	The average data rate, in packets per second, obtained for data received from the network by the subscriber during the last sampling period.
sust rate from user(pps)	The mean data rate, in packets per second, obtained for data sent from the subscriber to the network during the last three sampling periods.
sust rate to user(pps)	The mean data rate, in packets per second, obtained for data received from the network by the subscriber during the last three sampling periods.
link online/active percent	The percentage of time that the data link was online and active during the last sampling period.
ipv4 bad hdr	Indicates the number of IPv4 packets received with bad headers.
ipv4 ttl exceeded	Indicates the number of IPv4 packets dropped because their time-to-live was exceeded for this subscriber session.
ipv4 fragments sent	Indicates the number of IPv4 packet fragments that were transmitted.
ipv4 could not fragment	Indicates the number of IPv4 packets that could not be fragmented.
ipv4 input acl drop	Indicates the number of IPv4 packets dropped due to an inbound access control list (ACL) violation. This counter may increment even if no ACL is configured.
ipv4 output acl drop	Indicates the number of IPv4 packets dropped due to an outbound access control list (ACL) violation.
ipv4 input css down drop	Indicates the number of input packets dropped because the CSS service is yet not up or the service went down.
ipv4 output css down drop	Indicates the number of output packets dropped because the CSS service is yet not up or the service went down.
ipv4 output xoff pkts drop	Indicates the number of packets dropped because of flow control.
ipv4 output xoff bytes drop	Indicates the number of bytes dropped because of flow control.

Field	Description
input pkts dropped (0 mbr)	The total number of input packets dropped when a 0 MBR is received in a UPC (Update PDP Context Request) indicating that the UE is out of radio coverage.
output pkts dropped (0 mbr)	The total number of output packets dropped when a 0 MBR is received in a UPC (Update PDP Context Request) indicating that the UE is out of radio coverage.
output pkts dropped lore	The total number of packets dropped due to a UE loss of radio coverage condition. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QoS change with GTP-C extension for LORC.
ipv4 source violations	Indicates the number of IPv4 source validation violations.
ipv4 proxy-dns redirect	The number of foreign DNS request packets intercepted and redirected to the home DNS for the subscriber.
ipv4 proxy-dns pass-thru	The number of foreign DNS request packets allowed through the intercept filter for the subscriber.
ipv4 proxy-dns drop	The number of foreign DNS request packets not matching either redirect or pass-thru rules for the subscriber.
ip source violations no acct	The IP source validation violations that were detected but not included in the statistics.
ip source violations ignored	The IP source validation violations that were detected but then ignored.
ipv4 output no-flow drop	The number of IP packets not matching traffic classifier and dropped for the subscriber.
dormancy total	Indicates the total amount of time in seconds that the subscriber session was dormant over the duration of the session.
handoff total	The total number of subscriber sessions handed off.
ipv4 icmp packets dropped	When hide service address is enabled and a service in the system is sent ping packets or a traceroute is executed, the packets pertaining to the service address are dropped. This counter shows the number of those packets that have been dropped.
Access-flows	The total number of matching access-flows. For flow based service subscribers it provides information on access flow id, packet data flow id, service data flow id, type of access flow, QoS policy name, and direction of flow.
CAE Server Address	The IPv4 address of the CAE serving the subscriber.
Total subscribers matching specified criteria	The total number of subscribers matching the specified criteria.

show subscribers full username

Table 426.show subscriber full username Command Output Descriptions

Field	Description
Username	Specifies the name of the subscriber.
Status	Indicates the status of the subscriber’s session. The status can be Online/Active or Offline/Dormant/Idle.
Access Type	Indicates the session type for this subscriber. The possible types are: - S: pdsn-simple-ip - M: pdsn-mobile-ip - H: ha-mobile-ip - P: ggsn-pdp-type-ppp - h: ha-ipsec - N: lns-l2tp - I: ggsn-pdp-type-ipv4 - A: asngw-simple-ip - G: IPSEG - V: ggsn-pdp-type-ipv6 - B: asngw-mobile-ip - C: cscf-sip - R: sgw-gtp-ipv4 - O: sgw-gtp-ipv6 - Q: sgw-gtp-ipv4-ipv6 - W: pgw-gtp-ipv4 - Y: pgw-gtp-ipv6 - Z: pgw-gtp-ipv4-ipv6
Access Type (<i>cont.</i>)	- s: sgsn - p: sgsn-pdp-type-ppp - 4: sgsn-pdp-type-ip - 6: sgsn-pdp-type-ipv6 - L: pdif-simple-ip - K: pdif-mobile-ip - x: S1-MME - F: standalone-fa - J: asngw-non-anchor - e: ggsn-mbms-ue - i: asnpc - E: ha-mobile-ipv6 - X: HSGW - u: Unknown

Field	Description
Network Type	Indicates the network service used for the subscriber session. Possible values are: - I : IP - M : Mobile-IP - L : L2TP - P : Proxy-Mobile-IP - i : IP-in-IP - G : GRE - V : IPv6-in-IPv4 - S : IPSEC - A : R4 (IP-GRE) - u : Unknown
Access Tech	Indicates Accessing Technology. The possible types are: - X : CDMA 1xRTT - E : GPRS GERAN - I : IP - D : CDMA EV-DO - U : WCDMA UTRAN - W : Wireless LAN - A : CDMA EV-DO RevA - G : GPRS Other - M : WiMAX - C : CDMA Other - N : GAN (Generic Access Network) - H : HSPA (High Speed Packet Access) - P : PDIF - . : Other/Unknown
BSID	Displays the ASN base station identifier (MAC address).
callid	Displays the subscriber's call identification number (callid).
msid	Displays the subscriber's mobile station identification (MSID).
3GPP2 Carrier ID	Unique identifier for the carrier.
3GPP2 ESN	Electronic Serial Number of the mobile handset.
Card/Cpu	Indicates the ID of Card and CPU.
Sessmgr Instances	Displays the session manager instances.
state	Indicates the status of session. The possible status are: - Connected - Connecting - Disconnecting - Unknown
PCF address	Specifies the IP address of PCF in decimal notation.
connect time	Displays the time of connection starts.
call duration	Specifies total duration of call session in hh:mm:ss format
idle time	Displays the amount of time that the subscriber session has been idle either in an active or dormant state.

Field	Description
idle time left	Shows the amount of idle time left before timeout.
session time left	How much session time is left for the specified subscriber.
long duration time left	Shows how much time is left for the maximum duration of a specified subscriber session.
long duration action	Shows the setting for the action to take when the long duration timer expires. The possible values for this are: - Detection - Detect and send SNMP trap and CORBA notification only. - Disconnection - Disconnect the session and send SNMP trap and CORBA notification.
always on	Session Update message was sent to the PCF to notify the PCF that the subscriber has the Always On feature enabled.
ip address	The IP address of the interface in the session.
Primary DNS Address	The primary DNS address of the interface in the session.
Secondary DNS Address	The secondary DNS address of the interface in the session.
home-agent	The IP address of the mobile IP user's home agent.
pdsn-service name	The PDSN service that is running this session and the context name of the PDSN-service with the service-name.
fa-service name context	The FA service that is running this session and the context name of the FA-service with the service-name for a MIP call.
ggsn-service name	The GGSN service that is running this session and the context name of the GGSN-service with the service-name.
source context	Specifies the name of a configured source context from which the subscriber initiates a session.
destination context	Specifies the name of a configured destination context through which the subscriber is provided access to the packet data network.
ip header compression: (loc to rem) vj, (rem to loc) vj	This specifies what header compression method is being used.
ROHC max-cid (local/remote)	For Robust Header Compression, indicates the maximum value of a context identifier.
ROHC mrru (local/remote)	For Robust Header Compression, indicates the maximum reconstructed reception unit.
ROHC max-hdr (local/remote)	For Robust Header Compression, the largest header size in octets that may be compressed.
AAA context	The context in which the AAA service is configured.
AAA domain	The domain in which the AAA service is configured.
AAA start count	The number of accounting start messages sent to the accounting server for the subscriber session.
AAA stop count	The number of accounting stop messages sent to the accounting server for the subscriber session.
AAA interim count	The number of accounting interim messages sent to the accounting server for the subscriber session.
Acct-session-id	Identifies a subscriber session or PDP context.
AAA RADIUS group	Indicates the group of AAA RADIUS server assigned to specific subscriber for AAA functionality.

Field	Description
RADIUS Auth Server IP	The RADIUS authentication server's IP address.
RADIUS Acct Server IP	The RADIUS accounting server's IP address. When the RADIUS Accounting Mediation Device is configured, this field will NOT display the RADIUS accounting mediation server's IP address.
NAS IP Address	IP address of Network Access Server (NAS).
Nexthop IP Address	IP address of configured next-hop-forwarding-address in RADIUS attribute, subscriber configuration, or IP pool configuration.
Authentication Mode	The authentication mode. Possible modes are: • None • User (Single EAP) • Device (Single EAP) • Device-User (Double EAP) • Device-User (Single EAP)
Authentication Type	The authentication type.
EAP-Type	The type of EAP authentication. Possible types are: • EAP-Pre-shared Key (EAP-PSK) • EAP-Transport Layer Security (EAP-TLS) • EAP-Tunneled Transport Layer Security (EAP-TTLS) • EAP-Authentication and Key Agreement (EAP-AKA)
Client Type	The type of client, which can be Regular or Data. Identifies whether the client is a regular client, which includes voice, or a data client, which is data only.
active input acl	Specifies active Access Control List (ACL) for input.
active output acl	Specifies active Access Control List (ACL) for output.
ECS Rulebase	Specifies applicable Rulebase for this subscriber when ECS is enabled.
active input pley grp	Specifies active input policy group for traffic flow.
active output pley grp	Specifies active output policy group for traffic flow.
MIPHA Session	
Care-of-Address	The IP address of the device terminating the tunnel to the mobile node. The address may belong to either a Foreign Agent that is facilitating the subscriber's Mobile IP session or another device that the mobile node is associated (co-located) with.
Home-Address	The IP address assigned to the subscriber's mobile node for the duration of the session.
HA-Address	The IP address of the Home Agent that is facilitating the subscriber's Mobile IP session.
Lifetime	The accepted lifetime interval for this session.
Remaining Life	The amount of time that remains after which the session expires and is torn down.
Reverse Tunneling On	Displays whether or not reverse tunneling is enabled for the subscriber's session.

Field	Description
Encapsulation Type	The encapsulation method used for the subscriber's session.
GRE Key	The key that uniquely identifies the subscriber session when the Generic Routing Encapsulation (GRE) protocol Encapsulation Type.
IPSec Required	Indicates whether or not IPSec is required for the subscriber Mobile IP session.
IPSec Ctrl Tunnel Estab.	If IPSec is required for the session, this field indicates whether or not the control tunnel has been established.
IPSec Data Tunnel Estab.	If IPSec is required for the session, this field indicates whether or not the data tunnel has been established.
Revocation Negotiated	Indicates whether or not MIP Registration Revocation was negotiated between the FA and the HA for this subscriber session. Possible values are: No or yes.
Revocation I bit Negotiated	Indicates whether or not the Revocation I bit was negotiated. Possible values are : No or Yes.
Colocated COA	Indicates whether or not the subscribers that registered a MIP colocated COA directly with the HA. Options are No or Yes.
NAT Detected	Indicates whether or not network address translation (NAT) is detected. Options are No or Yes.
MN-HA-Key-Present	The security parameter index (SPI) key is used to verify a trusted host environment and that communications are to be established between known hosts. Checks for presence of mobile node (MN) - home agent (HA) key. Options are True or False.
MN-HA-SPI	Mobile node (MN) - home agent (HA) security parameter index (SPI).
FA-HA-Key-Present	The SPI key is used to verify a trusted host environment and that communications are to be established between known hosts. Checks for presence of the FA - HA key. Options are True or False.
FA-HA-SPI	FA - HA security parameter index (SPI).
MN-FA-Key-Present	The SPI key is used to verify a trusted host environment and that communications are to be established between known hosts. Checks for presence of the MN - FA key. Options are True or False.
MN-FA-SPI	MN - FA security parameter index (SPI).
Layer 3 tunneling	Indicates if Layer 3 tunneling is enabled.
prepaid status	Indicates if prepaid status is on or off.
external inline svr processing	Indicates if external inline server processing is on or off.
IPv6 Egress address filtering	Enable IPv6 egress address filtering feature.
IPv6 DNS Proxy	Enables/Disables the domain name server proxy for the current session.
Proxy DNS Intercept List	Identifies the proxy DNS intercept list used for the subscriber.
access-link ip-frag	Configures IP fragmentation processing over the Access-link.
ignore DF-bit data tunnel	Use this command to configure a user so that during Mobile IP tunneling the DF bit is not ignored and packets are not fragmented.
MIP grat-ARP mode	Indicates if gratuitous ARPs are sent out for an HA session upon handoff and renewal requests.

Field	Description
Downlink traffic-policing	Shows if traffic policing is enabled for the downlink direction.
Uplink traffic-policing	Shows if traffic policing is enabled for the uplink direction.
input pkts	Indicates the number of packets received.
output pkts	Indicates the number of packets transmitted.
input bytes	Indicates the number of bytes received.
output bytes	Indicates the number of bytes transmitted.
input bytes dropped	Indicates the number of bytes that were dropped while receiving data for this subscriber session.
output bytes dropped	Indicates the number of bytes that were dropped while transmitting data for this subscriber session.
input pkts dropped	Indicates the number of packets that were dropped while receiving data for this subscriber session.
output pkts dropped	Indicates the number of packets that were dropped while transmitting data for this subscriber session. This field includes packets blocked by Access Control Lists (ACLs). Do not use this figure when computing the total number of output packets.
input pkts dropped due to zero mbr	Indicates the number of packets that were dropped while receiving data due to configured maximum bit rate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
output pkts dropped due to zero mbr	Indicates the number of packets that were dropped while transmitting data due to configured maximum bitrate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
pk rate from user(bps)	The peak data rate, in bits per second, obtained for data sent from the subscriber to the network during the last sampling period.
pk rate to user(bps)	The peak data rate, in bits per second, obtained for data received from the network by the subscriber during the last sampling period.
ave rate from user(bps)	The average data rate, in bits per second, obtained for data sent from the subscriber to the network during the last sampling period.
ave rate to user(bps)	The average data rate, in bits per second, obtained for data received from the network by the subscriber during the last sampling period.
sust rate from user(bps)	The mean data rate, in bits per second, obtained for data sent from the subscriber to the network during the last three sampling periods.
sust rate to user(bps)	The mean data rate, in bits per second, obtained for data received from the network by the subscriber during the last three sampling periods.
pk rate from user(pps)	The peak data rate, in packets per second, obtained for data sent from the subscriber to the network during the last sampling period.
pk rate to user(pps)	The peak data rate, in packets per second, obtained for data received from the network by the subscriber during the last sampling period.

Field	Description
ave rate from user(pps)	The average data rate, in packets per second, obtained for data sent from the subscriber to the network during the last sampling period.
ave rate to user(pps)	The average data rate, in packets per second, obtained for data received from the network by the subscriber during the last sampling period.
sust rate from user(pps)	The mean data rate, in packets per second, obtained for data received from the network by the subscriber during the last three sampling periods.
link online/active percent	The percentage of time that the data link was online and active during the last sampling period.
ipv4 bad hdr	Indicates the number of IPv4 packets received with bad headers.
ipv4 ttl exceeded	Indicates the number of IPv4 packets dropped because their time-to-live was exceeded for this subscriber session.
ipv4 fragments sent	Indicates the number of IPv4 packet fragments that were transmitted.
ipv4 could not fragment	Indicates the number of IPv4 packets that could not be fragmented.
ipv4 input acl drop	Indicates the number of IPv4 packets dropped due to an inbound access control list (ACL) violation. NOTE: This counter may increment even if no ACL is configured.
ipv4 output acl drop	Indicates the number of IPv4 packets dropped due to an outbound access control list (ACL) violation.
ipv4 input css down drop	Indicates the number of input packets dropped because the CSS service is yet not up or the service went down.
ipv4 output css down drop	Indicates the number of output packets dropped because the CSS service is yet not up or the service went down.
ipv4 output xoff pkts drop	Indicates the number of packets dropped because of flow control.
ipv4 output xoff bytes drop	Indicates the number of bytes dropped because of flow control.
ip source violations	Indicates the number of IPv4 source validation violations.
ipv6 egress filtered	Enable IPv6 egress address filtering feature.
ipv4 proxy-dns redirect	The number of foreign DNS request packets intercepted and redirected to the home DNS for the subscriber.
ipv4 proxy-dns pass-thru	The number of foreign DNS request packets allowed through the intercept filter for the subscriber.
ipv4 proxy-dns drop	The number of foreign DNS request packets not matching either redirect or pass-thru rules for the subscriber.
ip source violations no accounting	The IP source validation violations that were detected but not included in the statistics.
ip source violations ignored	The IP source validation violations that were detected but then ignored.
dormancy total	Indicates the total amount of time in seconds that the subscriber session was dormant over the duration of the session.
handoff total	The total number of subscriber sessions handed off.

Field	Description
ipv4 icmp packets dropped	When hide service address is enabled and a service in the system is sent ping packets or a traceroute is executed, the packets pertaining to the service address are dropped. This counter shows the number of those packets that have been dropped.
Access-flows	The total number of matching access-flows.

show subscribers ggsn-only

Table 427. `show subscribers ggsn-only` Command Output Descriptions

Field	Description
Total Subscribers	Total number of subscribers registered on system for GGSN service session.
TotalPDP contexts	Total number of PDP contexts registered on the system for GGSN service session.
Total MBMS-UE contexts	Total number of MBMS-UE contexts registered on the system for GGSN service session.
pdp-type-ipv4	Total number of PDP contexts of IPv4 type registered on the system for GGSN service session.
pdp-type-ppp	Total number of PDP contexts of PPP type registered on the system for GGSN service session.
pdp-type-ipv6	Total number of PDP contexts of IPv6 type registered on the system for GGSN service session.
mbms-ue-type-ipv4	Total number of MBMS-UE contexts of IPv4 type registered on the system for GGSN service session.
ip-type-static	Total number of MS, having static IP allocation, registered with GGSN service session on this system.
ip-type-local-pool	Total number of MS, having IP allocation from local IP pool, are registered with GGSN service session on this system.
ip-type-aaa-ip	Total number of MS, having IP allocation from AAA server, are registered with GGSN service session on this system.
ip-type-dhcp-proxy	Total number of MS, having IP allocation through DHCP-proxy, are registered with GGSN service session on this system.
ip-type-dhcp-relay	Total number of MS, having IP allocation through DHCP-relay, are registered with GGSN service session on this system.
ip-type-unknown	Total number of MS, having IP allocation through unknown method, are registered with GGSN service session on this system.
ip-type-no-alloc	Total number of MS, having no IP allocation, are registered with GGSN service session on this system. Generally IP allocation for a Multicast session of this type.
ip-type-static-nrpca	Total number of MS, having static IP allocation through network requested PDP context activation, are registered with GGSN service session on this system.
in bytes dropped	Total number of bytes dropped in downlink (from PDN) direction for GGSN service session on the system.
out bytes dropped	Total number of bytes dropped in uplink (to PDN) direction for GGSN service session on the system.
in packet dropped	Total number of packets dropped in downlink (from PDN) direction for GGSN service session on the system.
out packet dropped	Total number of packets dropped in uplink (to PDN) direction for GGSN service session on the system.

Field	Description
in packet dropped due to zero mbr	Indicates the number of packets that were dropped while receiving data due to configured maximum bit rate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
out packet dropped due to zero mbr	Indicates the number of packets that were dropped while transmitting data due to configured maximum bit rate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
out packet dropped due to lorc	Indicates the number of packets that were dropped while UE was out of coverage area or radio coverage was lost for a subscriber. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC.
ipv4 ttl exceeded	Indicates the number of IPv4 packets dropped because their time-to-live was exceeded for this subscriber session.
ipv4 bad hdr	Indicates the number of IPv4 packets received with bad headers.
ipv4 bad length trim	Indicates the number of IPv4 packets received with bad trimming of packet length.
ipv4 frag failure	Indicates the number of IPv4 packet fragments that were transmitted.
ipv4 frag sent	Indicates the number of IPv4 packets that could not be fragmented.
ipv4 in-acl dropped	Indicates the number of IPv4 packets dropped due to an inbound access control list (ACL) violation. This counter may increment even if no ACL is configured.
ipv4 out-acl dropped	Indicates the number of IPv4 packets dropped due to an outbound access control list (ACL) violation.
ipv6 bad hdr	Indicates the number of IPv6 packets received with bad headers.
ipv6 bad length trim	Indicates the number of IPv6 packets received with bad trimming of packet length.
ipv6 in-acl dropped	Indicates the number of IPv4 packets dropped due to an inbound access control list (ACL) violation. This counter may increment even if no ACL is configured.
ipv6 out-acl dropped	Indicates the number of IPv4 packets dropped due to an outbound access control list (ACL) violation.
ipv4 in-css-down dropped	Indicates the number of input packets dropped because the CSS service is yet not up or the service went down.
ipv4 out-css-down dropped	Indicates the number of output packets dropped because the CSS service is yet not up or the service went down.
ipv4 early pdu rcvd	The current total number of early IP packet data units (PDUs) received.
ipv4 icmp packets dropped	Indicates the total number of IPv4 ICMP packets dropped for GGSN service on this system. When hide service address is enabled and a service in the system is sent ping packets or a traceroute is executed, the packets pertaining to the service address are dropped. This counter shows the number of those packets that have been dropped.
dormancy count	Indicates the total amount of time in seconds that the subscriber session was dormant over the duration of the GGSN session on this system.
handoff count	The total number of subscriber sessions handed off for GGSN service on this system.
Bearer not ready	Indicates the total number of instances when bearer was not ready and data received for session.

Field	Description
output bytes dropped	Indicates the cumulative number of bytes dropped for all GGSN subscriber session on this system.
output pkts dropped	Indicates the cumulative number of bytes dropped for all GGSN subscriber session on this system.
ggsn preservation mode	Indicates whether “Preservation-Mode” is enabled or not. Note that this is a customer-specific feature and may not be available for other users.
Direct Tunnel Bearers	Indicates total number of bearer contexts active for direct tunnel support for SGSN with this GGSN service on system.
ggsn LORC state	Indicates the number of session where overcharging protection is enabled due to loss of radio coverage. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC.

show subscribers ggsn-only all

Table 428. show subscribers ggsn-only all Command Output Descriptions

Field	Description
vvvvvvv	Displays service and session state information. This column provides a code consisting of seven characters. From left-to-right, the first character represents the network Type that the subscriber is using. The possible access types are: - I: pdp-type-ipv4 - P: pdp-type-ppp - V: pdp-type-ipv6 - e: mbms-ue - z: pdp-type-ipv4v6 From left-to-right, the second character represents the network Access Tech that the subscriber is using. The possible access technologies are: - U: WCDMA UTRAN - E: GPRS GERAN - G: GPRS OTHER - W: Wireless LAN - N: GAN - S: HSPA From left-to-right, the third character represents the Call State. The possible call states are: - C: Connected - c: Connecting - d: Disconnecting - u: Unknown From left-to-right, the fourth character (ggsn-only output) represents the Traffic Class. The possible traffic classes are: - C: Conversational - S: Streaming - B: Background - 1: Interactive 1 - 2: Interactive 2 - 3: Interactive 3 - x: Not Applicable

Field	Description
vvvvvvv (cont.)	From left-to-right, the fifth character represents the Network Type of the session. The possible network types are: - I: IP - M: Mobile-IP - L: L2TP - P: Proxy-Mobile-IP - i: IP-in-IP - G: GRE - T: IPv6 - V: IPv6-in-IPv4 - u: Unknown From left-to-right, the sixth character (ggsn-only output) represents the PLMN of the session. The possible network types are: - H: Home - V: Visiting - R: Roaming - u: Unknown From left-to-right, the seventh character (ggsn-only output) represents the Emergency Bearer Type of the session. The possible emergency bearer types are: - A: Authentic IMSI - U: Un-Authentic IMSI - O: Only IMEI - N: Non-Emergency
CALLID	Displays the subscriber's call identification (callid) number.
IMSI	Displays the International Mobile Subscriber Identity (IMSI) number (ggsn-only output)
NSAPI	Displays the Network Service Access Point Identifier (ggsn-only output).
Address type	Displays the Address type (ggsn-only output) for the subscriber's session. The possible address types are: - S: Static (Subscriber Supplied) - L: Local pool - RA: RADIUSAAA - assigned - d: via DHCP proxy - D: via DHCP relay - u: Unknown
IP	Displays the IP address assigned to the subscriber.
APN	Displays the Access Point Name for the session (ggsn-only output).
Gn-APN	Displays the APN that comes in CPC. If there is no virtual-apn resolution, both Gi & Gn APN are the same.
Gi-APN	Displays the APN finally selected by the GGSN based on the virtual-apn configuration. If there is no virtual-apn resolution, both Gi & Gn APN are the same.
TIME-IDLE	Displays the amount of time that the subscriber session has been idle either in an active or dormant state.

show subscribers ggsn-only full

Table 429. show subscribers ggsn-only full Command Output Descriptions

Field	Description
Username	The name of the subscribers using GGSN service.
Status	Indicates the session status. Possible status are: - Online/Active - Offline/Inactive
Access Type	Indicates the session type for this subscriber. Possible access types are: - ggsn-pdp-type-ppp - ggsn-pdp-type-ipv4 - IPSG - ggsn-pdp-type-ipv6 - Unknown
Network Type	Indicates the network service used for the subscriber session. Possible network types are: - IP - Mobile-IP - L2TP - Proxy-Mobile-IP - IP-in-IP - GRE - IPv6-in-IPv4 - IPSec - R4 (IP-GRE) - Unknown
Access Tech	Indicates the accessing technology. Possible access technologies are: - GPRS GERAN - IP - WCDMA UTRAN - HSPA - Wireless LAN - GPRS Other - Other/Unknown
Access Network Peer ID	Indicates the identifier of the peer in access network.
callid	The subscriber's call identification number (callid).
imsi	The subscriber's International mobile station identification (IMSI).
state	The session state. The possible values are: - Connected - Connecting - Disconnecting - Unknown
SGSN cntl address	IP address of SGSN system in network for control messages.

Field	Description
SGSN data address	IP address of SGSN system in network for data traffic messages.
Protocol User Name	User name of protocol.
MSISDN	The Mobile Station International ISDN Number of subscriber node.
connect time	The time of connection of this subscriber.
call duration	Duration of call session.
idle time	Duration of idle status of call session, when no activity detected for this session.
IMEI(SV)	International mobile equipment identification- software version of connected subscriber.
SGSN-MCC-MNC	Mobile country code (MCC) and mobile network code (MNC) of SGSN connected for this call.
Gi-APN	Access point name used for this session on Gi interface, towards PDN.
NSAPI	Identifier for Network Service Access Point (NSAP) index.
Gn-APN	Access point name used for this session on Gn interface, in network side between GSNs.
IMS Auth Service	Indicates whether IMS authorization (Gx) interface support is enabled or not.
GGSN Preservation Mode	Indicates whether preservation-mode support for GGSN is enabled or not. NOTE: This is a customer specific counter and dependent of customer specific license only.
Vendor Id	Indicates the identification of vendor who uses GGSN preservation mode feature.
GGSN LORC State	Indicates the state of the overcharging protection feature for specific subscriber. Possible status are: • Yes- overcharging protection is enabled • No- overcharging protection is enabled • N/A- overcharging protection is not applicable This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QoS change with GTP-C extension for LORC.
GGSN Bearer Control Mode	Indicates whether network controlled QoS negotiation enabled or not and also the mode applicable for bearer control for this. Possible values are: - MS-Only - Mixed (MS and Network)
FOCS	Indicates whether free of charge service is enabled or not. Note that this is a customer specific service and dependent of customer specific license only.
ODB	Indicates whether Operator Determined Barring is enabled or not. Note that this is a customer specific service and dependent of customer specific license only.
ip address	Indicates the primary IP address of the subscriber interface in the session.
ggsn-service-name	The name of the GGSN service for this subscriber.
initiated by	Indicates whether QoS initiated by MS or network.
Subscriber Type	Indicates the type of subscriber. Possible values are Visiting or Home.

Field	Description
Accounting mode	Indicates the accounting mode applicable for this subscriber. Possible modes are: - gtp - none - radius-diameter
APN Selection mode	Indicates the APN selection mode applicable for this subscriber. Possible modes are: - Chosen by SGSN - Sent by MS - Subscribed
ip allocation type	Indicates the IP allocation type applicable for this subscriber. Possible types are: - DHCP proxy - DHCP relay - local pool - AAA
gtp version	Indicates the GTP version used for this subscriber. Possible versions are 0 and 1.
ggsn c-teid	Indicates the GGSN Tunnel Endpoint Identifier (TEID) for GTP-C messages.
ggsn u-teid	Indicates the GGSN Tunnel Endpoint Identifier (TEID) for GTP-U messages.
sgsn c-teid	Indicates the SGSN Tunnel Endpoint Identifier (TEID) for GTP-C messages.
sgsn u-teid	Indicates the SGSN Tunnel Endpoint Identifier (TEID) for GTP-U messages.
charging id	Indicates the charging identifier for this subscriber.
charging chars	Specifies the charging characteristics behavior applicable for this subscriber session.
access-link ip-frag	Configures IP fragmentation processing over the Access-link.
ignore DF-bit data-tunnel	Indicates if whether during Mobile IP tunneling, the DF bit is not ignored and packets are not fragmented.
traffic flow template	The name of the traffic flow template (TFT) applicable for this subscriber session.
Source context	The name of a configured source context from which the subscriber initiates a session.
Destination context	The name of a configured destination context through which the subscriber is provided access to the packet data network.
Authentication context	The name of a configured authentication context from which the subscriber gets authentication.
Accounting context	The name of a configured accounting context through which the subscriber is provided accounting of data session.
Mediation context	The name of a configured mediation context to use for communicating with the mediation device. If this context is not specified in APN configuration mode, the destination context will be used.
Mediation no early PDUs	Specifies whether “no-early-pdu” option configured for this subscriber or not. If “no-early-PDUs” is enabled, the chassis shall not send uplink/downlink data from/to a MS till it receives the Acct-Rsp Start for the same from the mediation device. On receiving the Acct-Rsp, pending PDUs are sent out.
Mediation No Interims	Specifies whether “no-interims” option configured for this subscriber or not. If “no-interims” is enabled, the chassis shall not send any interim message to the mediation device.

Field	Description
Mediation Delay GTP Response	Specifies whether “ delay-gtp-response ” option configured for this subscriber or not. When enabled, this option delays the Create PDP Context response until an Accounting Start response is received from the mediation device.
active input acl	The active IPv4 access control list (ACL) for inward traffic.
active output acl	The active IPv4 access control list (ACL) for outward traffic.
active input IPv6 acl	The active IPv6 access control list (ACL) for inward traffic.
active output IPv6 acl	The active IPv6 access control list (ACL) for outward traffic.
ECS Rulebase	The rulebase applicable for this subscriber when ECS is enabled.
CBB-Policy	The CBB policy associated with the subscriber.
Firewall Policy	Indicates whether firewall processing for this subscriber is enabled.
CF Policy ID	The identifier of content filtering policy ID.
active input pley grp	The active input policy group for inward traffic flow.
active output pley grp	The active output policy group for outward traffic flow.
Layer 3 tunneling	Indicates if Layer 3 tunneling is enabled.
alloc/retention priority	Indicates the traffic handling priority for quality of service (QoS) differentiated service code point (DSCP) if the allocation priority is present in the QoS profile. Possible priorities are 1, 2 or 3.
traffic class	Indicates the class of traffic applied for quality of service (QoS) in this subscriber session. Possible classes are: - background - conversational - interactive - streaming
traffic priority	Indicates the priority for interactive class of traffic for this subscriber session. Possible priorities are 1, 2 or 3.
delivery order	Specifies the delivery order included in service data unit (SDU) for packets to this subscriber.
Negotiated MBR for up (bps)	Indicates the maximum bit rate in bits per seconds negotiated for this subscriber in uplink direction.
Negotiated MBR for down (bps)	Indicates the maximum bit rate in bits per seconds negotiated for this subscriber in downlink direction.
Negotiated GBR for up (bps)	Indicates the guaranteed bit rate in bits per seconds negotiated for this subscriber in uplink direction.
Negotiated GBR for down (bps)	Indicates the guaranteed bit rate in bits per seconds negotiated for this subscriber in downlink direction.
Ran Procedure Ready buffering	Indicates whether RAN Procedure Ready delay buffering is enabled for GGSN service used by this subscriber or not. Possible states are Enabled or Disabled.
Ran procedure pkts buffered	Indicates the total number of packets buffered in sub-system waiting for RAB setup ready flag. This is enabled for RAN Procedure Ready delay buffering feature for GGSN service used by this subscriber. Buffer limit is 1024 packets.

Field	Description
Ran procedure buffer overflow pkts drop	Indicates the total number of packets dropped after sub-system buffer was full (buffer limit is 1024 packets) and GGSN is still waiting for RAB setup ready flag. This is enabled for RAN Procedure Ready delay buffering feature for GGSN service used by this subscriber.
Downlink traffic-negotiate-limit	Indicates whether traffic flow negotiate limit is configured for this subscriber under traffic policing feature in downlink direction.
Downlink traffic-rate-limit	Indicates whether traffic flow rate limit is configured for this subscriber under traffic shaping feature in downlink direction.
Uplink traffic-negotiate-limit	Indicates whether traffic flow negotiate limit is configured for this subscriber under traffic policing feature in uplink direction.
Uplink traffic-rate-limit	Indicates whether traffic flow rate limit is configured for this subscriber under traffic shaping feature in uplink direction.
Downlink traffic-shaping	Indicates whether traffic shaping is enabled or not for this subscriber under traffic shaping feature in downlink direction. Possible states are Enabled or Disabled.
Uplink traffic-shaping	Indicates whether traffic shaping is enabled or not for this subscriber under traffic shaping feature in uplink direction. Possible states are Enabled or Disabled.
Peak data rate(bps)	Indicates the peak data rate allowed in downlink/uplink direction through traffic rate limiting.
Guaranteed data rate(bps)	Indicates the guaranteed data rate allowed in downlink/uplink direction through traffic rate limiting.
Burst Size	This group indicates the static/dynamic burst size in bytes for peak and guaranteed rate limiting for this class of QoS in this APN.
Auto Readjust	Indicates whether auto readjustment of burst size is enabled or not. Possible states are Enabled or Disabled.
Auto Readjust Duration	Indicates the configured auto readjust duration in a seconds. If auto readjust is enabled and no readjust duration is specified the default value is 1 second.
Peak Burst Size(bytes)	Indicates the peak burst size in bytes calculated dynamically by auto readjust duration and rate limit value.
Guaranteed Burst Size(bytes)	Indicates the guaranteed burst size in bytes calculated dynamically by auto readjust duration (seconds) and rate limit value (bytes). This counter is applicable only when auto readjustment is enabled.
Peak data rate(bps)	Indicates the peak data rate configured for this subscriber in bits per seconds.
Guaranteed data rate(bps)	Indicates the guaranteed data rate configured for this subscriber in bits per seconds.
Downlink CSS Information	This group provides the information regarding content steering service for downlink traffic.
Service Name	Name of the content steering service applicable for downlink traffic.
downlink pkts to svc	Total number of packets from subscriber node (downlink direction) sent to CSS service.
downlink pkts from svc	Total number of packets from CSS service sent to subscriber node (downlink direction).

Field	Description
Uplink CSS Information	This group provides the information regarding content steering service for uplink traffic.
Service Name	Name of the content steering service applicable for uplink traffic.
uplink pkts to svc	Total number of packets from PDN/Internet (uplink direction) sent to CSS service.
uplink pkts from svc	Total number of packets from CSS service sent to PDN/Internet (uplink direction).
Bearer Establishment	Indicates the status of bearer establishment.
Bearer not ready	This group indicates the number of bytes dropped when bearer was ready.
IM-CN Signaling Context	Specifies the name of the signaling context used for IM-CN (IP Multimedia-Core Network) for interoperability with IP multimedia subsystem (IMS) service.
input pkts	Indicates the number of packets received.
output pkts	Indicates the number of packets transmitted.
input bytes	Indicates the number of bytes received.
output bytes	Indicates the number of bytes transmitted.
input bytes dropped	Indicates the number of bytes that were dropped while receiving data for this subscriber session.
output bytes dropped	Indicates the number of bytes that were dropped while transmitting data for this subscriber session.
input pkts dropped	Indicates the number of packets that were dropped while receiving data for this subscriber session.
output pkts dropped	Indicates the number of packets that were dropped while transmitting data for this subscriber session. This field includes packets blocked by Access Control Lists (ACLs). Do not use this figure when computing the total number of output packets.
input pkts dropped due to zero mbr	Indicates the number of packets that were dropped while receiving data due to configured maximum bit rate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
output pkts dropped due to zero mbr	Indicates the number of packets that were dropped while transmitting data due to configured maximum bit rate (MBR) was set to zero for a subscriber. This counter is applicable when system drops uplink/downlink packets when SGSN notifies Update PDP Contexts for QOS change with bandwidth rate as zero for conversation/streaming class of services.
out packet dropped due to lorc	Indicates the number of packets that were dropped while UE was out of coverage area or radio coverage was lost for a subscriber. This counter is applicable when GGSN is enabled for overcharging protection for subscriber due to loss of radio coverage and SGSN notifies Update PDP Contexts for QOS change with GTP-C extension for LORC.
pk rate from user(bps)	The peak data rate, in bits per second, obtained for data sent from the subscriber to the network during the last sampling period.
pk rate to user(bps)	The peak data rate, in bits per second, obtained for data received from the network by the subscriber during the last sampling period.
ave rate from user(bps)	The average data rate, in bits per second, obtained for data sent from the subscriber to the network during the last sampling period.

Field	Description
ave rate to user(bps)	The average datarate, in bits per second, obtained for data received from the network by the subscriber during the last sampling period.
sust rate from user(bps)	The mean data rate, in bits per second, obtained for data sent from the subscriber to the network during the last three sampling periods.
sust rate to user(bps)	The mean data rate, in bits per second, obtained for data received from the network by the subscriber during the last three sampling periods.
pk rate from user(pps)	The peak datarate, in packets per second, obtained for data sent from the subscriber to the network during the last sampling period.
pk rate to user(pps)	The peak datarate, in packets per second, obtained for data received from the network by the subscriber during the last sampling period.
ave rate from user(pps)	The average datarate, in packets per second, obtained for data sent from the subscriber to the network during the last sampling period.
ave rate to user(pps)	The average datarate, in packets per second, obtained for data received from the network by the subscriber during the last sampling period.
sust rate from user(pps)	The mean data rate, in packets per second, obtained for data sent from the subscriber to the network during the last three sampling periods.
sust rate to user(pps)	The mean data rate, in packets per second, obtained for data received from the network by the subscriber during the last three sampling periods.
link online/active percent	The percentage of time that the data link was online and active during the last sampling period.
ipv4 bad hdr	Indicates the number of IPv4 packets received with bad headers.
ipv4 ttl exceeded	Indicates the number of IPv4 packets dropped because their time-to-live was exceeded for this subscriber session.
ipv4 fragments sent	Indicates the number of IPv4 packet fragments that were transmitted.
ipv4 could not fragment	Indicates the number of IPv4 packets that could not be fragmented.
ipv4 inputacl drop	Indicates the number of IPv4 packets dropped due to an inbound access control list (ACL) violation. This counter may increment even if no ACL is configured.
ipv4 outputacl drop	Indicates the number of IPv4 packets dropped due to an outbound access control list (ACL) violation.
ipv4 inputcss down drop	Indicates the number of input packets dropped because the CSS service is yet not up or the service went down.
ipv4 outputcss down drop	Indicates the number of output packets dropped because the CSS service is yet not up or the service went down.
ipv4 outputxoffpkts drop	Indicates the number of packets dropped because of flow control.
ipv4 outputxoffbytes drop	Indicates the number of bytes dropped because of flow control.
ipv4 source violations	Indicates the number of IPv4 source validation violations.
ipv4 proxy-dns redirect	The number of foreign DNS request packets intercepted and redirected to the home DNS for the subscriber.

Field	Description
ipv4 proxy-dns pass-thru	The number of foreign DNS request packets allowed through the intercept filter for the subscriber.
ipv4 proxy-dns drop	The number of foreign DNS request packets not matching either redirect or pass-thru rules for the subscriber.
ip source violations no acct	The IP source validation violations that were detected but not included in the statistics.
ip source violations ignored	The IP source validation violations that were detected but then ignored.
ipv4 output no-flow drop	The number of IP packets not matching traffic classifier and dropped for the subscriber.
dormancy total	Indicates the total amount of time in seconds that the subscriber session was dormant over the duration of the session.
handoff total	The total number of subscriber sessions handed off.
ipv4 icmp packets dropped	When hide service address is enabled and a service in the system is sent ping packets or a traceroute is executed, the packets pertaining to the service address are dropped. This counter shows the number of those packets that have been dropped.
DHCP context	Name of the system context in which DHCP service is configured.
DHCP service	Name of the DHCP service configured for this subscriber.
DHCP server	Name of the DHCP servers configured for this subscriber for DHCP function.
DHCP lease expiry policy	Specifies the DHCP address lease expiry policy. Possible actions are autoconnect or disconnect
DHCP lease obtained	Specifies the whether lease obtained after lease expiry or not.
DHCP lease remaining	Specifies the status of lease obtained for DHCP allocated IP address.
Total subscribers matching specified criteria	The total number of subscribers matching the specified criteria.

show subscribers gprs-only full

Table 430. Show subscribers gprs-only full Command Output Descriptions

Field	Description
Access Type	Number of GPRS access type, for the subscriber. Possible categories are: • SGSN • GGSN
Access Tech	Number of access technologies associated with the PLMN that is being accessed by the Mobile Station (MS). The Access Tech can be: • GPRS GERAN • GSM COMPACT • UTRN • E-UTRN
Network Type	Network type associated with the PLMN or HPLMN on the PLMN selector. The MS uses this information to select the type of radio carrier for searching, while attempting to select a specific PLMN. Network Type can be: • IP • IP Sec • Mobile IP
msid	Displays the Mobile Station Identification (MSID) associated with the subscriber.
Callid	Displays the subscriber's call identification number.
State	Displays the state of GPRS session in the Mobile Station. Data transfer between MS and network depends on this state. The state can be: • Idle • Stand by • Active • Ready
Connect Time	The date and time when the call was connected to the GPRS network in Day MMDD HH:MM:SS YYYY format.
Call Duration	Total time lapsed after call connection, for this subscriber. Displayed in format hhmmss.
Idle Time	Time period for which the subscriber session has been idle either in standby or dormant state. Displayed in format hhmmss.
User Location (RAI)	This is the Routing Area Indicator (RAI). It indicates user location in GPRS network.
Cell Global Identity	Cell Global Identity (CGI) indicates a category of user location information that can be used to geographically locate the connected MS.

Field	Description
IMEI (SV)	International Mobile Identity (IMEI) Software Version (SV) associated with MS.
Equipment Status	Equipment status of the mobile equipment, queried from Equipment Identity Registry (EIR).
Source Context	Name of configured source context that was used for session initiation.
Destination Context	Name of configured destination context that was used by the subscriber to access the network.
Accounting Context	The context name where accounting information is configured or where an accounting interface is configured. It can be used to provide accounting of the data session to the subscriber.
Charging Characteristics	Displays associated charging characteristics. It can be: • Hot Billing • Flat Rate Billing • Prepaid Billing • Normal Billing
Characteristics Selection Mode	The selection mode of charging characteristics that is applicable to this session. For example selection mode can be Home or Roaming.
Subscriber Plmn Type	Category of subscriber's Public Land Mobile Network (PLMN). Possible values are: • H: home Networks • F: Foreign Networks • U: Unknown Networks
PPF	The Page Proceed Flag (PPF) indicates whether paging for PS and CS services can be initiated. Possible values are True or False.
NGAF	The Non Gprs Alert Flag (NGAF), indicates whether the MS activity is being reported to MCSC or VLR. Possible values for this flag are True or False.
VLR-Reliable	This flag is set to False when SGSN has received a reset indication from the VLR. The SGSN, upon reception of next Routing Area Update (RAU), may request the MS a procedure to re-attach to non-GPRS services provided that the MS is IMISI attached to such non-GPRS request. Alternately, the SGSN, upon reception of a combined RAU and Location Area Update (LAU) request from an MS that is still attached to non-GPRS service, performs location update procedure for such non-GPRS service.
VLR – Association	States associated with the Gs interface in the VLR. Possible states are: • GS NULL • LA UPDATE PRESENT • Gs ASSOCIATED
NRI Assigned	Assigned Network Resource Indicator (NRI). The NRI is utilized when either Iu-flex or Gb-flex or MOCN configuration is used for network sharing.
ISR – Activated	The activation status of Idle mode Signaling Reduction (ISR). This status can either be True or False.

Field	Description
Nego Ready Timer	This value is sent from SGSN to MS. It indicates timeout ready timer value. Its range is from 0 to 11160 seconds the default value is 44 seconds.
MS Network Capacity	The MS network capacity elements provide MS information related to GPRS network. These elements indicate general Mobile Station (MS) characteristics, hence are independent of the frequency band of the channel for which this capability is set. The MS network capacity specifies parameters such as : • Revision level indicator • SoLSA capacity • SS screening indicator • Whether UCS2 character set is enabled • SMS via GPRS Channel • Whether Gprs Encryption Algorithm (GEA) - GEA1 to GEA 7 are supported or not • LCS VA
Revision Level Indicator (MS Network Capability)	The 3GPP released version that is supported by the MS network capability.
SoLSA Capability (MS Network Capability)	Specifies whether the Support of Localized Service Area (SoLSA) is included in the MS network capability.
SS Screening Indicator (MS Network Capability)	Category of Supplemental Services (SS) screening indicator that is being sent by MS to the network to assess the capabilities of the MS. This indicator is sent by the MS at the beginning of the radio connection.
UCS2 (MS Network Capability)	Specifies whether the Universal Character Set 2 (UCS2) encoding for the character is supported or whether the use of default alphabet is supported.
SMS via GPRS CH (MS Network Capability)	Specifies whether the MS support for mobile terminated point to point SMS via GPRS channel is included in the MS network capability or not.
SMS via Dedicated CH (MS Network Capability)	Specifies whether the MS support for mobile terminated point to point SMS via a dedicated GPRS channel is included in the MS network capability or not.
GEA/1 (MS Network Capability)	Specifies whether support for GPRS Encryption Algorithm 1 (GEA1) is included in the MS network capability.
GEA/2 (MS Network Capability)	Specifies whether support for GPRS Encryption Algorithm 2 (GEA2) is included in the MS network capability.
GEA/3 (MS Network Capability)	Specifies whether support for GPRS Encryption Algorithm 3 (GEA3) is included in the MS network capability.
GEA/4 (MS Network Capability)	Specifies whether support for GPRS Encryption Algorithm 4 (GEA4) is included in the MS network capability.
GEA/5 (MS Network Capability)	Specifies whether support for GPRS Encryption Algorithm 5 (GEA5) is included in the MS network capability.
GEA/6 (MS Network Capability)	Specifies whether support for GPRS Encryption Algorithm 6 (GEA6) is included in the MS network capability.
GEA/7 (MS Network Capability)	Specifies whether support for GPRS Encryption Algorithm 7 (GEA7) is included in the MS network capability.

Field	Description
LCS VA Capability (MS Network Capability)	Specifies whether the Location Services Value Add (LCS VA) capability is included or not in the MS network capacity.
DRX Parameter	Discontinuous Reception (DRX) is used when the MS is in the packet idle mode. If MS is using the discontinuous reception, then the DRX parameters indicate whether the MS is in no-sleep mode and is able to receive paging requests and channel assignments. GPRS uses two DRX modes namely, normal DRX and split paging DRX. Following are the DRX parameters : • Split PG cycle code • Split on CCCH • Non-DRX timer • CN Specific DRX cycle length coefficient.
SPLIT PG Cycle Code (DRX Parameter)	displays the cycle code for the split paging mode.
SPLIT on CCCH (DRX Parameter)	Specifies whether split on Common Control Channel (CCCH) is supported or not.
Non-DRX timer (DRX Parameter)	Value of non-DRX timer after transfer state, displayed in seconds.
CN Specific DRX cycle length coefficient (DRX Parameter)	Specifies the Core Network (CN) specific DRX cycle length coefficient support by MS. An MS can be attached to either circuit or packet domain of CN. For the circuit domain the MS uses the circuit domain CN- domain specific cycle length coefficient broadcasted in system information.
Current PTMSI	Current value of Packet Temporary Mobile Subscriber Identity (P-TMSI). P-TMSI gets attached to the MS when GPRS attach procedure is performed. P-TMSI is used to avoid transmitting the IMSI over air interface. P-TMSI is only applicable in the geographical area served by the SGSN. When the MS move to another geographical area, a new P-TMSI gets attached to the MS.
Current PTMSI Aced by MS	Acknowledgement status of current P-TMSI by the MS. Possible values are yes and no.
Any Previous PTMSI	Specifies whether any previous P-TMSI value is available for this MS.
MNRG Flag	Current value of Mobile station Not Reachable in GPRS (MNRG) flag. This flag is found in Home Location Register (HLR) and it indicates whether SGSN can reach this MS. Possible values for this flag are true and false.
NRI Assigned	Number of assigned Network Resource Indicators (NRIs). An NRI is a part of TMSI in CS domain and P-TMSI in PS domain.
Number of Free Vectors	Number of free authentication vectors available for the Universal Subscriber Identity Module (USIM) that is associated with the MS.
Number of Used Vectors	Number of authentication vectors used by the Universal Subscriber Identity Module (USIM) associated with the MS.
Number of In-Use Vectors	Indicates the number of authentication vectors that are being used by the Universal Subscriber Identity Module (USIM) that is associated with the MS.
MSISDN (Subscription Data)	The Mobile Station Integrated Subscriber Digital Network Number (MSISDN) associated with the MS. It uniquely identifies a subscription in a mobile network.

Field	Description
Charging Characteristics (Subscription Data)	Associated charging characteristic profile. It can be hot or normal or pre-paid or flat billing.
ODB General Data	Operator Determined Barring (ODB) data. The ODB is an unsigned 32 bit Attribute Value Pair (AVP) containing a bit mask that indicates the services barred by the operator. As per the bit mask: • Bit 0 indicates that all packet oriented services are barred. • Bit 1 indicates that roamer access HPLMN-AP barred. • Bit 2 indicates that roamer access VPLMN- AP barred. • Bit 3 indicates barring of all outgoing calls. • Bit 4 indicates barring of all outgoing international calls. • Bit 5 indicates barring of all outgoing international calls except those directed to the home PLMN country. • Bit 6 indicates barring of all outgoing inter-zonal calls. • Bit 7 indicates barring of all outgoing inter-zonal calls, except those directed to the home PLMN country. • Bit 8 indicates barring of all outgoing international calls, except those directed to the home PLMN country and barring of all inter-zonal calls. Following parameters constitute the ODB general data: • All Out Going Calls. • All International Outgoing Calls. • All International Outgoing Not To HPLMN Country Calls. • All Interzonal Outgoing Calls. • All Interzonal And International Outgoing Calls Not To HPLMN Country. • Roamer Access to VPLMN Access Point Barred.
All Out Going Calls (ODB-General-Data)	Specifies permission for all categories of outgoing calls associated with this MS. This is a parameter of ODB General Data. These calls can be barred or not-barred.
All International Outgoing Calls (ODB-General-Data)	Specifies the permission for international outgoing calls associated with this MS. This is a parameter of ODB General Data. These calls can be barred or not-barred.
All International Outgoing Not To HPLMN Country Calls (ODB-General-Data)	Specifies permission for the international outgoing calls that are not made to Home Public Land Mobile Network (HPLMN). This is a parameter of ODB General Data. These calls can be barred or not-barred.
All Interzonal Outgoing Calls (ODB-General-Data)	Specifies the permission for the Interzonal outgoing calls associated with this MS. This is a parameter of ODB General Data. These calls can be barred or not-barred.
All Interzonal And International Outgoing Calls Not To HPLMN Country (ODB-General-Data)	Specifies the permission for all interzonal and international calls that are not made to HPLMN country. This is a parameter of ODB General Data. These calls can be barred or not barred.
Roamer Access to HPLMN Access Point Barred (ODB-General-Data)	Specifies whether the access point for roamer access to Home PLMN is barred or not. This is a parameter of ODB General Data.

Field	Description
Roamer Access to VPLMN Access Point Barred (ODB-General-Data)	Specifies whether the access point for roamr access to Visitor PLMN is barred or not. This is a parameter of ODB General Data.
ODB-HPLMN-Data	Specifies the availability of HPLMN data for Operator Defined Barring (ODB).
Zone-Code-List	Zone code list that can be associated with the subscription. A zone is combination of origin and destination area codes. Zoning information can be used for rating and charging purpose.
Tele-Service Code List	Code of the barer servie (tele service) associated with this subscription.
HLR Number	the Home Location Register (HLR) associated with this subscription.
HLR-Reset Flag	Specifies the whether the HLR associated with this subscription was reseted or not. Possible values of this flag are true and false.
Utran-not-allowed (ARD)	Value of UTRN –not –allowed flag in the Algorithim Requirements Document (ARD) associated with this subscription. Possible values are true or false.
Geran-not-allowed (ARD)	Value of GERAN –not –allowed flag in the Algorithim Requirements Documet (ARD) associated with this subscription. Possible values are true or false.
Super-Charger Enabled	Current value of Super-Charger Enabled flag. It can be either true or False. Subscriber movement accross MSC or VLR forces the HLR to provision new serving MSC or VLR with the subscriber data by moving this data. These signaling procedures add signifiant overhead in the network traffic. Specifically in high population aerates where the MSC or VLR is handling significantly smaller geographical area. In s supercharged network the HLR does not remove subscriber data from old MSC or VLR and this data can be used when subscriber roams back to old MSC or VLR.
SAI Version	Current version of SAI. The Service Area Identifier (SAI) is a combination of PLMN-id, Location Area Code (LAC) and Service Area Code (SAC). The SAI identifies an area consisting of one or more cells belonging to same LA.
EPS Subscription	Eanhaned Packet Service (EPS) subscription data includes subscription related data. Refer the 3GPP technical standard 3GPP TS 23.016 and other related standards for more information.
PDP Context Id (PDP Subscription Data)	Identifies the PDP context for PDP subscription data.
APN (PDP Subscription Data)	Identifies the Access Point Name (APN) associated with this PDP subscription.
PDP Type (PDP Subscription Data)	Category of PDP context. For example it can be IPv4, IPv6 or PPP.
PDP Address Type (PDP Subscription Data)	Category or type of address allocation for PDP address. For example it can be static or dynamic.
Ext PDP Address Type (PDP Subscription Data)	Category or type of address allocation for external PDP address. For example it can be static or dynamic.
Charging Characteristics (PDP Subscription Data)	Category of charging characteristics associated with this PDP subscription. For example charging characteristics can be either normal billing or hot billing.
VPLMN Address Allowed (PDP Subscription Data)	Specifies whether the address of Visited Public Land Mobile Network (VPLMN) is allowed or not allowed.

Field	Description
Reliability Class (PDP Subscription Data)	Reliability class associated with the PDP subscription. It considers reliability attributes such as delivery order, traffic handling priority, as well as allocation and retention priority. For example reliability class for PDP subscription can be unacknowledged GTP, LLC, acknowledged RLC or protected data.
Delay Class (PDP Subscription Data)	Defined category of network transient delay for the PDP subscription data. For example class 4.
Precedence Class (PDP Subscription Data)	Service precedence delay supported by SGSN by discarding or allowing packets based on the precedence class for the PDP subscription. For example the precedence class for PDP subscription can be high priority.
Peak Throughput (PDP Subscription Data)	Configured maximum allowed throughput rate for the PDP subscription. Along with other fields such as reliability, delay or precedence class, it can be used for traffic shaping.
Mean Throughput (PDP Subscription Data)	Configured mean throughput rate for the PDP subscription. Along with other fields such as reliability, delay or precedence class, it can be used for traffic shaping.
Allocation/Retention Priority (PDP Subscription Data)	Allocation, retention priority indicates the reliability of the PDP subscription data. For example for various traffic classes such as conversational, streaming, interactive and background, this priority can be defined as 1 or 2 or 3.
Delivery of Erroneous SDUs (PDP Subscription Data)	Status of the delivery of erroneous Service Delivery Units (SDUs) for the PDP subscription. For example it indicates whether the delivery of erroneous SDU's are detected or not.
Traffic Class (PDP Subscription Data)	Category of traffic associated with this PDP subscription. Traffic is broadly categorized as Conversational, Streaming, Background and Interactive.
Max Sdu Size (PDP Subscription Data)	Maximum allowable size of Service Data Units (SDUs) in octets, which is associated with this PDP subscription data.
Max Bit Rate Uplink (PDP Subscription Data)	Maximum allowable rate in kbps for sending that data from an MS to network, that is associated with the PDP subscription.
Max Bit Rate Downlink (PDP Subscription Data)	Maximum allowable rate in kbps for sending the data from network to the MS, which is associated with the PDP subscription.
Residual Bit Error rate (PDP Subscription Data)	Reliability based on residual Bit Error Rate (BER) associated with PDP subscription. For specific traffic class such as conversational, streaming, interactive or background, certain range of residual BER is required.
Sdu Error rate (PDP Subscription Data)	Reliability class based on Service Delivery Unit (SDU) error rate associated with the PDP subscription. For specific traffic class such as Conversational, Streaming, Interactive or background, certain range of SDU error rate is required.
Traffic Handling Priority (PDP Subscription Data)	Priority or importance of handling SDUs belonging to a specific context associated with the PDP subscription.
Transfer Delay (PDP Subscription Data)	Delay encountered in milliseconds (ms), while delivering about 95% of SDUs associated with the PDP context, in the life time of the bearer service.
Guaranteed Bit Rate Uplink (PDP Subscription Data)	Guaranteed number of bits delivered by MS to network in kbps for the associated PDP context.
Guaranteed Bit Rate Downlink (PDP Subscription Data)	Guaranteed number of bits delivered by network to MS, in kbps for the associated PDP context.
APN (User Name)	Access Point Name used by the Mobile Station (MS) to communicate with the GPRS network. It determines the IP addresses used by and security methods applicable to the MS.

Field	Description
PDP address (User Name)	IP address associated with the PDP context that is being used by this user name or subscriber.
NSAPI (User Name)	Network (layer) Service Access Point Identifier (NSAPI) that is being used to identify the unique data session or the PDP context associated with the MS and the SGSN.
Context initiated by (User Name)	Context or session initiated by the user name.
LLC SAPI (User Name)	Logical Link Control Service Access Point Identifier LLC SAPI associated with this user name.
Context Plmn Type (User Name)	PLMN context associated with the MS. IT can be home or roaming.
GGSN c-teid (User Name)	GGSN control plane Tunnel Endpoint Identifier (teid), that is associated with this subscription. The teid is a unique number that is allocated by the GSN (SGSN or GGSN) and it identifies the tunnel data related to a specific PDP context. The teid along with IP address and UDP port number is used to identify the Gprs Tunneling Protocol (GTP) tunnel that is being established between two GPRS nodes to deliver packets.
GGSN u-teid (User Name)	GGSN user plan Tunnel End Point Identifier (teid), that is associated with this subscription. The teid is a unique number that is allocated by the GSN (SGSN or GGSN) and it identifies the tunnel data related to a specific PDP context. The teid along with IP address and UDP port number is used to identify the GTP tunnel that is being established between two GPRS nodes to deliver packets.
SGSN c-teid (User Name)	SGSN control plane Tunnel Endpoint Identifier (teid), that is associated with this subscription. The teid is a unique number that is allocated by the GSN (SGSN or GGSN) and it identifies the tunnel data related to a specific PDP context. The teid along with IP address and UDP port number is used to identify the Gprs Tunneling Protocol (GTP) tunnel that is being established between two GPRS nodes to deliver packets.
SGSN u-teid (User Name)	SGSN user plan Tunnel End Point Identifier (teid), that is associated with this subscription. The teid is a unique number that is allocated by the GSN (SGSN or GGSN) and it identifies the tunnel data related to a specific PDP context. The teid along with IP address and UDP port number is used to identify the GTP tunnel that is being established between two GPRS nodes to deliver packets.

Field	Description
Requested and Negotiated QoS	A Quality of Service Profile (QoS) profile for the GPRS is defined using service parameters such as: • Traffic class • Reliability class • Delay class • Maximum bit rate uplink throughput • Maximum bit rate downlink throughput • Guaranteed bit rate downlink throughput • Residual bit error rate • SDU error rate • Traffic handling priority • Transfer delay Using these parameters an MS requests the network with specific values for the QoS profile parameters and the network provides the negotiated values of the profile parameters. There can be a difference between the values of the QoS parameters requested by the Mobile Station (MS), and those negotiated with the network.
Reliability Class (Requested-QoS)	It's a QoS attribute associated with reliability. It considers reliability attributes such as delivery order, traffic handling as well as allocation or retention priority. Possible values are unchecked GTP, LLC, acked RLC and protected data. This indicates a QoS parameter value requested by the MS to the network.
Delay Class (Requested-QoS)	It's a QoS attribute associated with traffic flow, the delay class indicates network transient delay. This indicates a QoS parameter value requested by the MS to the network.
Precedence Class (Requested-QoS)	It's a QoS attribute that indicates the service precedence supported by the GPRS network by discarding packets, based on requested and negotiated precedence class. For example a precedence class can have Priority values as high, Normal and Low. This indicates the QoS parameter value requested by the MS to the network.
Peak Throughput (Requested-QoS)	It's a QoS attribute that indicates configured, maximum allowed throughput rate. This attribute along with other attributes such as precedence, delay and reliability classes can be used for shaping traffic between GPRS network and MS.
Mean Throughput (Requested-QoS)	It's a QoS attribute that indicates configured mean throughput rate. This attribute along with other attributes such as precedence, delay and reliability classes can be used for shaping traffic between GPRS network and the MS. This is the QoS parameter value requested by the MS to the network.
Delivery of Erroneous SDUs (Requested-QoS)	It is the QoS status regarding the delivery of erroneous Service Delivery Units (SDUs). For example it indicates whether or not the delivery of the erroneous SDUs is detected or not. This is the QoS parameter value requested by the MS to the network.

Field	Description
Traffic Class (Requested-QoS)	Category of traffic class as per the QoS requested by the MS. The traffic is broadly categorized as: • Conversational • Streaming • Background • Interactive This is the QoS parameter value requested by the MS to the network.
Max Sdu Size (Requested-QoS)	Maximum allowable size of Service Data Units (SDUs) in octets. This is the QoS parameter value requested by the MS to the network.
Max Bit Rate Uplink (Requested-QoS)	Maximum allowable traffic rate in kbps, for sending data from MS to the network. This is the QoS parameter value requested by the MS to the network.
Max Bit Rate Downlink (Requested-QoS)	Maximum allowable traffic rate in kbps for sending the data from network to MS. This is the QoS parameter value requested by the MS to the network.
Residual Bit Error rate (Requested-QoS)	Reliability based on residual Bit Error Rate (BER). Certain BER rate is associated with specific category of the traffic class such as conversational, streaming, and interactive or background. This is the QoS parameter value requested by the MS to the network.
Sdu Error rate (Requested-QoS)	Service Delivery Unit (SDU) error rate. This is the QoS parameter value requested by the MS to the network.
Traffic Handling Priority (Requested-QoS)	Priority or level of handling SDUs belonging to a specific context. This is the QoS parameter value requested by the MS to the network.
Transfer Delay (Requested-QoS)	Delay encountered in ms, while delivering about 95% of SDUs belonging to specific context. This is the QoS parameter value requested by the MS to the network.
Guaranteed Bit Rate Uplink (Requested-QoS)	Guaranteed number of bits transferred in the specified time frame, by the MS to the network. This is the QoS parameter value requested by the MS to the network.
Guaranteed Bit Rate Downlink (Requested-QoS)	Guaranteed number of bits transferred in the specified time frame, by the network to MS. This is the QoS parameter value requested by the MS to the network.
Reliability Class (Negotiated-QoS)	QoS attribute associated with reliability. It considers reliability attributes such as delivery order, traffic handling as well as allocation or retention priority. Possible values are unchecked GTP, LLC, acked RLC and protected data. This is the negotiated value between MS and the network.
Delay Class (Negotiated-QoS)	QoS attribute associated with traffic flow, the delay class indicates network transient delay. This is the negotiated value between MS and the network.
Precedence Class (Negotiated-QoS)	QoS attribute that indicates the service precedence supported by the GPRS network by discarding packets, based on requested and negotiated precedence class. For example a precedence class can have Priority values as high, Normal and Low. This is the negotiated value between MS and the network.
Peak Throughput (Negotiated-QoS)	QoS attribute that indicates configured, maximum allowed throughput rate. This attribute along with other attributes such as precedence, delay and reliability classes can be used for shaping traffic between GPRS network and MS. This is the negotiated value between MS and the network.

Field	Description
Mean Throughput (Negotiated-QoS)	QoS attribute that indicates configured mean throughput rate. This attribute along with other attributes such as precedence, delay and reliability classes can be used for shaping traffic between GPRS network and the MS. This is the negotiated value between MS and the network.
Allocation/Retention Priority (Negotiated-QoS)	Allocation, retention priority indicates the reliability of the PDP subscription data. For example for various traffic classes such as conversational, streaming, interactive and background, this priority can be defined as 1 or 2 or 3. This is the negotiated value between MS and the network.
Delivery of Erroneous SDUs (Negotiated-QoS)	QoS status regarding the delivery of erroneous Service Deliver Units (SDUs). For example it indicates whether or not the delivery of the erroneous SDUs is detected or not. This is the negotiated value between MS and the network.
Traffic Class (Negotiated-QoS)	Category of traffic class as per the QoS requested by the MS. The traffic is broadly categorized as: • Conversational • Streaming • Background • Interactive This indicates the negotiated value between MS and the network.
Max Sdu Size (Negotiated-QoS)	Maximum allowable size of Service Data Units (SDUs) in octets. This is the negotiated value between MS and the network.
Max Bit Rate Uplink (Negotiated-QoS)	Maximum allowable traffic rate in kbps, for sending data from MS to the network. This is the negotiated value between MS and the network.
Max Bit Rate Downlink (Negotiated-QoS)	Maximum allowable traffic rate in kbps for sending the data from network to MS. This is the negotiated value between MS and the network.
Residual Bit Error rate (Negotiated-QoS)	Reliability based on residual Bit Error Rate (BER). Certain BER rate is associated with specific category of the traffic class such as conversational, streaming, and interactive or background. This is the negotiated value between MS and the network.
Sdu Error rate (Negotiated-QoS)	Service Delivery Unit (SDU) error rate. This is the negotiated value between MS and the network.
Traffic Handling Priority (Negotiated-QoS)	Priority or level of handling SDUs belonging to a specific context. This is the negotiated value between MS and the network.
Transfer Delay (Negotiated-QoS)	Delay encountered in ms, while delivering about 95% of SDUs belonging to specific context. This is the negotiated value between MS and the network.
Guaranteed Bit Rate Uplink (Negotiated-QoS)	Guaranteed number of bits transferred in the specified time frame, by the MS to the network. This is the negotiated value between MS and the network.
Guaranteed Bit Rate Downlink (Negotiated-QoS)	Guaranteed number of bits transferred in the specified time frame, by the network to MS. This is the negotiated value between MS and the network.
Downlink traffic-rate-limit	Specifies whether the traffic rate limit for the data traffic from network to MS is enabled or disabled.
Uplink traffic-rate-limit	Specifies whether the traffic rate limit for the data traffic from MS to network is enabled or disabled.

Field	Description
input pkts	Specifies total number of error free packets received by the MS from the network.
input bytes	Total number of error free bytes received by the MS from the network.
input bytes dropped	Total number of input bytes dropped by the MS while receiving them from the network.
input pkts dropped	Total number of packets dropped by the MS while receiving the packets from the network.
input pkts dropped due to lorc	Number of input packets dropped by the MS while sending them to the network, due to Loss of Radio Service (LORC).
input bytes dropped due to lorc	Number of input bytes dropped by the MS while receiving them from the network due to Loss of Radio Service (LORC).
in packet dropped suspended state	Total number of packets dropped by the MS, because the packets were in suspended state, while receiving the packets from the network.
in bytes dropped suspended state	Total number of bytes dropped by the MS, because the bytes were in suspended state, while receiving the bytes from the network.
output pkts	Total number of error free packets sent by the MS to the network.
output bytes	Total number of error free bytes sent by the MS to the network.
output bytes dropped	Total number of output bytes dropped by the MS while sending them to network.
output pkts dropped	Total number of packets dropped by the MS while sending the packets to the network.
output pkts dropped due to lorc	Total number of packets dropped by the MS while sending the packets to the network, due to loss of radio service.
pk rate from user(bps)	Maximum allowed or peak rate of throughput from the MS to the network in bits per second (bps).
pk rate to user(bps)	Maximum allowed or peak rate of throughput from the network to the MS in bits per seconds (bps).
ave rate from user(bps)	Aaverage rate of throughput from the MS to the network in bits per second (bps).
ave rate to user(bps)	Average rate of throughput from the network to the MS in bits per seconds (bps).
sust rate from user(bps)	Sustainable rate of throughput from the MS to the network in bits per second (bps).
sust rate to user(bps)	Sustainable rate of throughput from the network to the MS in bits per seconds (bps).
pk rate from user(pps)	Maximum allowed or peak rate of throughput from the MS to the network in packets per second (pps).
pk rate to user(pps)	Maximum allowed or peak rate of throughput from the network to the MS in packets per seconds (pps).
ave rate from user(pps)	Average rate of throughput from the MS to the network in packets per second (pps).
ave rate to user(pps)	Average rate of data transfer from the network to the MS in packets per seconds (pps).
sust rate from user(pps)	Sustainable rate of throughput from the MS to the network in packets per second (pps).
sust rate to user(pps)	Sustainable rate of throughput from the network to the MS in packets per seconds (bps).

show subscribers hnbgw-only all

Table 431. show subscribers hnbgw-only all Command Output Descriptions

Field	Description
vv	Displays service and session state information. This column provides a code consisting of three characters. From left-to-right, the first character represents the network Type that the subscriber is using. The possible access types are: - H: HNB - P: PS Connection - C: CS Connection From left-to-right, the second character represents the Call State. The possible call states are: - R: Registered - D: Deregistered - C: Connected - N: Disconnected
CALLID	Displays the subscriber's call identification (callid) number on HNB-GW in HNB access network.
HNB/UE Id	Displays the HNB or UE identifier on HNB-GW in HNB access network.
HNB IP Address	Displays the HNB IP address registered on HNB-GW service in HNB access network.

show subscribers hnbgw-only full

Table 432. show subscribers hnbgw-only full Command Output Descriptions

Field	Description
Username	The name of the subscribers accessing HNB-GW over IuH or IuCS or IuPS connection on HNB-GW service.
Access Type	Indicates the access type used by subscriber session over HNB access network. Possible access types are: • hnbgw-hnb: IuH connection between HNB and HNB-GW • hnbgw-iu: IuCS or IuPS connection between HNB-GW and CN
Network Type	Indicates the type of network used by subscriber session over HNB access network. Possible network types are: - IP - IPSec - Unknown
Access Tech	Indicates the access technology used by subscriber session over HNB access network. Possible access technologies are FEMTO UTRAN or Other/Unknown
callid	Indicates the subscriber's call identification number (callid) used for this session.
msid	Indicates the subscriber's Mobile Station identification (MS id) used for this session.
state	Indicates the state of the subscriber session over HNB access network. The possible session states are: - R: Registered - D: Deregistered - C: Connected - N: Disconnected
HNB Ip Address	Indicates the primary IP address of the HNB in the session. In HNB-GW session this is the primary IP address of Femto CPE.
User Location (RAI)	Indicates the user location in Femto UTRAN network. This is the Routing Area Identifier (RAI) provided to HNBs during registration with this HNB-GW service. The RAC signifies the routing area that this HNBGW service belongs to and is configured under the PLMN-ID
Service Area Code	Identifies the Service Area (SA) code within a LA (Location Area) used during this HNB-GW session.
GlobalRNCId	Indicates the Global identifier used for Radio Network Controller used by this subscriber session in Femto UTRAN network.
IMSI	Indicates the IMSI number which is currently registered with HNB-GW service session instance.

Field	Description
Registration Type	Indicates the type of registration applies for specific subscriber session over HNB access network. Possible registration types are: - Normal: Indicates the normal subscriber session. In this type of session registration multiple Iu sessions and multiple Radio Access Bearers (RABs) are allowed. - Emergency: Indicates that current subscriber session is of Emergency type. In this type of session only on Iu session (CS or PS) with only one Radio Access Bearer (RAB) is allowed.
Context Id	Indicates the identity number of the context used by specific subscriber session over HNB-GW service instance.
SGSN Point Code	Indicates the SGSN address in SS7 point code where specific subscriber's IuPS session is attached and serve the PS session in Femto UTRAN access network.
Domain	Indicates the type of core network (CN) domain where specific subscriber's Iu (CS or PS) session is attached and served. Possible domains are: - Packet Switched (PS) Domain - Circuit Switched (CS) Domain
PS RABs	This group indicates the status and statistics of RABs used by specific subscriber session over IuPS interface while connected to HNB-PS core network.
Rab id	Indicates the identifier number of PS RAB used by specific subscriber session over IuPS interface while connected to HNB-PS core network.
State	Indicates the state of PS RAB used by specific subscriber session over IuPS interface while connected to HNB-PS core network. Possible states are Established or Released.
GTP-U Tunnel towards CN	This group indicates the setup information of GTP-U tunnel established between HNB-GW and HNB-PS core network (SGSN) for specific subscriber session over IuPS interface while connected to HNB-PS core network.
Remote Addr	Indicates the IP address of SGSN used as remote peer node at the end of GTP-U tunnel established between HNB-GW and HNB-PS core network (SGSN) for specific subscriber session over IuPS interface while connected to HNB-PS core network.
Remote TEID	Indicates the remote GTP-U tunnel end (SGSN side) identifier used by GTP-U tunnel established between HNB-GW and HNB-PS core network (SGSN) for specific subscriber session over IuPS interface while connected to HNB-PS core network.
Local Addr	Indicates the IP address of HNB-GW used by GTP-U tunnel established between HNB-GW and HNB-PS core network (SGSN) for specific subscriber session over IuPS interface while connected to HNB-PS core network.
Local TEID	Indicates the local GTP-U tunnel end (HNB-GW side) identifier used by GTP-U tunnel established between HNB-GW and HNB-PS core network (SGSN) for specific subscriber session over IuPS interface while connected to HNB-PS core network.
GTP-U Tunnel towards HNB	This group indicates the setup information of GTP-U tunnel established between HNB and HNB-GW for specific subscriber session over IuH interface while connected to HNB-PS core network.
Remote Addr	Indicates the IP address of HNB used as remote peer node at the end of GTP-U tunnel established between HNB and HNB-GW for specific subscriber session over IuH interface while connected to HNB-PS core network.
Remote TEID	Indicates the remote GTP-U tunnel end (HNB side) identifier used by GTP-U tunnel established between HNB and HNB-GW for specific subscriber session over IuH interface while connected to HNB-PS core network.

Field	Description
Local Addr	Indicates the IP address of HNB-GW used by GTP-U tunnel established between HNB and HNB-GW for specific subscriber session over IuH interface while connected to HNB-PS core network.
Local TEID	Indicates the local GTP-U tunnel end (HNB-GW side) identifier used by GTP-U tunnel established between HNB and HNB-GW for specific subscriber session over IuPS interface while connected to HNB-PS core network.
Data Fwd GTP-U Tunnel towards SGSN/T-RNC	This group indicates the setup information of Data Forwarding GTP-U tunnel established between HNB-GW and SGSN or target RNC (T-RNC) for specific subscriber session over IuPS interface while connected to HNB-PS core network.
Remote Addr	Indicates the IP address of SGSN/target RNC used as remote peer node at the end of Data forwarding GTP-U tunnel established between HNB-GW and SGSN or target RNC for specific subscriber session over IuPS interface while connected to HNB-PS core network.
Remote TEID	Indicates the remote Data Forwarding GTP-U tunnel end (SGSN or target RNC side) identifier used by GTP-U tunnel established between HNB-GW and SGSN or target RNC for specific subscriber session over IuPS interface while connected to HNB-PS core network.
Data Fwd GTP-U Tunnel towards HNB	This group indicates the setup information of Data Forwarding GTP-U tunnel established between HNB and HNB-GW for specific subscriber session over IuH interface while connected to HNB-PS core network.
Local Addr	Indicates the IP address of HNB-GW used as local address by Data forwarding GTP-U tunnel established between HNB and HNB-GW for specific subscriber session over IuH interface while connected to HNB-PS core network.
Local TEID	Indicates the local Data Forwarding GTP-U tunnel end (HNB-GW side) identifier used by GTP-U tunnel established between HNB and HNB-GW for specific subscriber session over IuH interface while connected to HNB-PS core network.
GTPU	This group indicates the data transmission information for specific subscriber session connected to HNB-PS core network.
GTPU Downlink Bytes Rx	Indicates the total number of bytes received by HNB-GW in downlink direction (from CN) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Downlink Bytes Tx	Indicates the total number of bytes transmitted by HNB-GW in downlink direction (towards HNB) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Downlink Packets Rx	Indicates the total number of packets received by HNB-GW in downlink direction (from CN) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Downlink Packets Tx	Indicates the total number of packets transmitted by HNB-GW in downlink direction (towards HNB) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Uplink Bytes Rx	Indicates the total number of bytes received by HNB-GW in uplink direction (from HNB) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Uplink Bytes Tx	Indicates the total number of bytes transmitted by HNB-GW in uplink direction (towards CN) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Uplink Packets Rx	Indicates the total number of packets received by HNB-GW in uplink direction (from HNB) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Uplink Packets Tx	Indicates the total number of packets transmitted by HNB-GW in uplink direction (towards CN) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.

Field	Description
GTPU Downlink Bytes dropped	Indicates the total number of bytes dropped by HNB-GW in downlink direction (from CN to HNB) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Uplink Bytes dropped	Indicates the total number of bytes dropped by HNB-GW in uplink direction (from HNB to CN) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Downlink Packets dropped	Indicates the total number of packets dropped by HNB-GW in downlink direction (from CN to HNB) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Uplink Packets dropped	Indicates the total number of packets dropped by HNB-GW in uplink direction (from HNB to CN) over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
Drop Cause	This group indicates the reasons for packet/bytes dropped by HNB-GW in downlink/uplink direction over GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
RAB not in CONNETED state	Indicates the total number of packets/bytes dropped by HNB-GW in downlink/uplink direction over GTP-U tunnel for specific subscriber session connected to HNB-PS core network as RAB was not connected when packets/bytes received by HNB-GW.
Miscellaneous	Indicates the total number of packets/bytes dropped by HNB-GW in downlink/uplink direction over GTP-U tunnel for specific subscriber session connected to HNB-PS core network due to Emergency type of session or other unknown cause.
GTPU Fwd Packets Rx	Indicates the total number GTP-U Forward packets received by HNB-GW over Data Forward GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
GTPU Fwd Packets Tx	Indicates the total number GTP-U Forward packets transmitted by HNB-GW over Data Forward GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
Drop Cause	This group indicates the reasons for Data Forward GTP-U packet dropped by HNB-GW over Data forward GTP-U tunnel for specific subscriber session connected to HNB-PS core network.
RAB not in CONNETED state	Indicates the total number of GTPU Forward packets dropped by HNB-GW over Data Forward GTP-U tunnel for specific subscriber session connected to HNB-PS core network as RAB was not connected when Data forward packets received by HNB-GW.
Miscellaneous	Indicates the total number of GTPU Forward packets dropped by HNB-GW over Data Forward GTP-U tunnel for specific subscriber session connected to HNB-PS core network due to Emergency type of session or other unknown cause.
MSC Point Code	Indicates the MSC address in SS7 point code where specific subscriber's Iu CS session is attached and serve the CS session in Femto UTRAN access network.
CS RABs	This group indicates the status and statistics of RABs used by specific subscriber session over IuCS interface while connected to HNB-CS core network.
Rab id	Indicates the identifier number of CS RAB used by specific subscriber session over IuCS interface while connected to HNB-CS core network.
State	Indicates the state of CS RAB used by specific subscriber session over IuCS interface while connected to HNB-CS core network. Possible states are: Established or Released.
IUH interface	This group displays the session setup information of IuH interface between HNB and HNB-GW used by specific subscriber session while connected to HNB-CS core network.
Local RTP Addr	Indicates the local IP address allocated to HNB-GW by RTP IP pool and used by HNB-GW for establishing IuH session with HNB. This address is used for RTP session in specific subscriber session while connected to HNB-CS core network.

Field	Description
Local RTP port	Indicates the local RTP port number used by HNB-GW for establishing luH session with HNB. This port is used by RTP session in specific subscriber session while connected to HNB-CS core network.
Remote RTP Addr	Indicates the remote IP address allocated to HNB by RTP IP pool and used by HNB-GW for establishing luH session with HNB. This address is used for RTP session in specific subscriber session while connected to HNB-CS core network.
Remote RTP port	Indicates the local RTP port number used by HNB for establishing luH session with HNB-GW. This port is used by RTP session in specific subscriber session while connected to HNB-CS core network.
RTP	This group indicates the RTP data packet transmission information for specific subscriber session connected to HNB-CS core network.
RTP Downlink Packets Rx	Indicates the total number of RTP packets received by HNB-GW in downlink direction (from CN) over luCS interface for specific subscriber session connected to HNB-CS core network.
RTP Uplink Packets Tx	Indicates the total number of RTP packets transmitted by HNB-GW in uplink direction (to CN) over luCS interface for specific subscriber session connected to HNB-CS core network.
RTP Downlink Packets dropped	Indicates the total number of RTP data packets dropped by HNB-GW in downlink direction (from CN to HNB) over luH interface for specific subscriber session connected to HNB-CS core network.
Drop Cause	This group indicates the reasons for RTP data packets dropped by HNB-GW in downlink/uplink direction over RTP tunnel for specific subscriber session connected to HNB-CS core network.
RAB not in CONNECTED state	Indicates the total number of packets dropped by HNB-GW in downlink direction over RTP tunnel for specific subscriber session connected to HNB-CS core network as RAB was not connected when RTP packets received by HNB-GW.
Miscellaneous	Indicates the total number of packets dropped by HNB-GW in downlink direction over RTP tunnel for specific subscriber session connected to HNB-CS core network due to Emergency type of session or other unknown cause.
IU interface	This group indicates the data packet transmission information over luCS interface for specific subscriber session connected to HNB-CS core network.
Transport	Indicates the type of transport used in HNB-GW service instance over luCS interface for specific subscriber session connected to HNB-CS core network. Possible type of transport are IP or ATM.
AAL2 Node	This group displays the information related to ATM adaptation layer 2 (AAL2) channel used for specific subscriber session connected to HNB-CS core network.
AAL2 Path	Indicates the identity number of AAL2 path used for ATM transport in AAL2 node which is applicable for specific subscriber session connected to HNB-CS core network.
AESA	Indicates the ATM End System Address (AESA) used for ATM transport in AAL2 node which is applicable for specific subscriber session connected to HNB-CS core network.
AAL2	This group indicates the AAL2 packet transmission information over ATM channel for specific subscriber session connected to HNB-CS core network.
AAL2 Downlink Packets Rx	Indicates the total number of AAL2 packets received by HNB-GW in downlink direction (from CN) over ATM channel for specific subscriber session connected to HNB-CS core network.
AAL2 Uplink Packets Tx	Indicates the total number of AAL2 packets transmitted by HNB-GW in uplink direction (to CN) over ATM channel for specific subscriber session connected to HNB-CS core network.
AAL2 Downlink Packets dropped	Indicates the total number of AAL2 packets dropped by HNB-GW in downlink direction (from CN to HNB) over ATM channel for specific subscriber session connected to HNB-CS core network.

Field	Description
Drop Cause	This group indicates the reasons for AAL2 packets dropped by HNB-GW in downlink direction over ATM channel for specific subscriber session connected to HNB-CS core network.
RAB not in CONNECTED state	Indicates the total number of packets dropped by HNB-GW in downlink direction over ATM channel for specific subscriber session connected to HNB-CS core network as RAB was not connected when ATM packets received by HNB-GW.
Miscellaneous	Indicates the total number of packets dropped by HNB-GW in downlink direction over ATM channel for specific subscriber session connected to HNB-CS core network due to Emergency type of session or other unknown cause.

show subscribers mme-only full

Table 433. show subscribers mme-only full Command Output Descriptions

Field	Description
Username	The subscriber name connected for EPS session.
Status	Indicates the status of EPS subscriber session. Possible status are Online/Active or Offline/Dormant/Idle.
Access Type	Indicates the type of access applicable for this subscriber. For MME subscribers it should be s1-mme .
Network Type	Indicates the type of network service used for the subscriber session.
Access Tech	Indicates the accessing technology. For MME session it is eU-TRAN.
Access Network Peer ID	Indicates the identifier of the peer in access network.
Peer Id	Indicates the identifier of the peer MME in home network.
callid	The MME subscriber's call identification number (callid).
msid	The MME subscriber's mobile station identification (MSID), and whether the subscriber is unauthenticated (such as during emergency attach).
imei	The MME subscriber's International Mobile Equipment Identity (IMEI).
guti	This group indicates the Globally Unique Temporary Identifier (GUTI) constructed with following identifiers: - PLMN (MMC and MNC) - MME Group ID (MMEGI) - MME Code (MMEC) - MME TMSI (M-TMSI)
plmn-id	Indicates the public mobile land network (PLMN) of which MME belongs. PLMN is constructed from MMC and MNC.
mme-group-id	Indicates the MME group Id of which MME belongs to.
mme-code	Indicates the MME code of which MME belongs to.
m-tmsi	Indicates the MME TMSI which is used to identify this subscriber in MME service.
MSISDN	Indicates the Mobile Subscriber Integrated Services Digital Network Number (MSISDN) of the subscriber connected to an MME service.
Card/Cpu	The card and CPU ID on which this MME subscriber session is running.
Sessmgr Instance	The session manager instances running for this subscriber.
state	The state of MME subscriber session. The possible values are: - Connected - Connecting - Disconnecting - Unknown

Field	Description
Peer address	IP address of peer MME system in network.
connect time	Indicate the time in DAYMMDD HH:MM:SS YYYY format when call connected to MME service.
call duration	Total time lapsed after call connected for this subscriber with this MME service.
idle time	The time period that the subscriber session has been idle, either in an active or dormant state.
ip address	Indicates the primary IP address of the subscriber interface in the session.
mme-service name	Indicates the name of MME service which is serving this subscriber for MME calls.
mme-service context	Indicates the name of system context in which particular MME service which is serving this subscriber for MME calls is configured.
source context	The name of the source context in which the S1-MME interface is configured for this MME service
destination context	The name of the destination context in which the S5/S8 interface is configured for this MME service.

show subscribers pdf-service

Table 434. show subscribers pdf-service Command Output Descriptions

Field	Description
vvvvv	Displays service and session state information. This column provides a code consisting of three characters. From left-to-right, the first character represents the Access Type that the subscriber is using. The possible access types are: - S: pdsn-simple-ip - M: pdsn-mobile-ip - H: ha-mobile-ip - P: ggsn-pdp-type-ppp - h: ha-ipsec - N: lns-l2tp - I: ggsn-pdp-type-ipv4 - A: asngw-simple-ip - G: IPSP - V: ggsn-pdp-type-ipv6 - B: asngw-mobile-ip - C: cscf-sip - d: vbm-voa - m: vbm-hoa - D: hbm-hoa - L: pdif-simple-ip - K: pdif-mobile-ip - F: standalone-fa - J: asngw-non-anchor - u: Unknown

Field	Description
vvvvv (<i>cont.</i>)	From left-to-right, the second character represents the Access Technology. The possible call states are: - X: CDMA 1xRTT - E: GPRS GERAN - I: IP - D: CDMA EV-DO - U: WCDMA UTRAN - W: Wireless LAN - A: CDMA EV-DO Rev A - G: GPRS Other - M: WiMAX - C: CDMA Other - N: GAN (Generic Access Network) - H: HSPA (High Speed Packet Access) - P: PDIF - .: Other/Unknown From left-to-right, the third character represents the Call State. The possible call states are: - C: Connected - c: Connecting - d: Disconnecting - u: Unknown - r: CSCF-Registering - R: CSCF-Registered - U: CSCF-Unregistered From left-to-right, the fourth character represents the Access CSCF Status of the session. The possible network types are: - A: Attached - N: Not Attached - .: Not Applicable
vvvvv (<i>cont.</i>)	From left-to-right, the fifth character represents the Link Status of the session. The possible idle states are: - A: Online/Active (airlink connected) - D: Dormant (airlink not connected) From left-to-right, the sixth character represents the session Network Type. The possible network types are: - I: IP - M: Mobile-IP - L: L2TP - P: Proxy-Mobile-IP - i: IP-in-IP - G: GRE - V: IPv6-in-IPv4 - S: IPSEC - A: R4 (IP-GRE) - u: Unknown
CALLID	Displays the subscriber's call identification (callid) number.
MSID	Displays the subscriber's mobile station identification (MSID) number.
USERNAME	Displays the subscriber's username.
IP	Displays the IP address assigned to the subscriber.
TIME-IDLE	Displays the amount of time that the subscriber session has been idle either in an active or dormant state.

show subscribers policy

Table 435. show subscribers policy Command Output Descriptions

Field	Description
PCC rule stats	
Install requests	Total number of Policy Control and Charging (PCC) rule install requests.
Remove requests	Total number of PCC rule removal requests.
Installed uplink	Total number of PCC rules installed for uplink direction.
Installed downlink	Total number of PCC rules installed for downlink direction.
Activate requests	Total number of PCC rule activate requests.
Deactivate requests	Total number of PCC rule deactivate requests.
Activate group	Total number of policy groups activated.
Deactivate group	Total number of policy groups deactivated.
Active Rules	Total number of active rules.
Temp Inactive Rules	Total number of temporary inactive rules.
PCC rule failure stats	
Rule install failure	Total number of PCC rule install failures.
Rule remove failure	Total number of PCC rule removal failures.
Activation failure	Total number of PCC rule activation failures.
Deactivation failure	Total number of PCC rule deactivation failures.
Group activation failure	Total number of policy group activation failures.
Group deactivation failure	Total number of policy group deactivation failures.
Event stats	
Session up	Total number of subscriber sessions up.
Session down	Total number of subscriber sessions down.
Handoff	Total number of handoffs occurred.
RAT change	Total number of Radio Access Type (RAT) changes occurred.
User location change	Total number of user location changes occurred.
Default Bearer QoS change	Total number of default bearer QoS changes occurred.
Flow create	Total number of flows created.
Flow delete	Total number of flows deleted.

Field	Description
Bearer loss	Total number of bearer loss.
Bearer recovery	Total number of bearer recoveries after loss of bearer.
Update tft	Total number of Traffic Flow Template (TFT) updates.
Update qos	Total number of QoS updates.
UE Time Zone change	Total number of UE time zone changes occurred.
Event failure stats	
Session up	Total number of session up failures.
Session down	Total number of session down failures.
Handoff	Total number of handoff failures.
RAT change	Total number of RAT change failures.
User location change	Total number of user location change failures.
Default Bearer QoS change	Total number of default bearer QoS change failures.
Flow create	Total number of flow creation failures.
Flow delete	Total number of flow deletion failures.
Bearer loss	Total number of bearer loss failures.
Bearer recovery	Total number of bearer recovery failures.
Update tft	Total number of TFT update failures.
Update qos	Total number of QoS update failures.
UE Time Zone change	Total number of UE time zone change failures.
Auth stats	
Auth request	Total number of authorization requests sent.
Auth failure	Total number of authorization request failures.
Reauth request	Total number of re-authorization requests sent.
Reauth request failure	Total number of re-authorization request failures.
Terminate request	Total number of terminate requests sent.
Terminate request failure	Total number of terminate request failures.

show subscribers sgsn-only full

Table 436. show subscribers sgsn-only full Command Output Descriptions

Field	Description
Source context	Specifies the name of a configured source context from which the subscriber initiates a session.
Destination context	Specifies the name of a configured destination context through which the subscriber is provided access to the packet data network.
Accounting context	Specifies the name of a configured accounting context through which the subscriber is provided accounting of data session.
Subscriber Plmn Type	Indicates the subscriber type of Public Land Mobile Network area. Possible values are: - H : Home networks - F : Foreign networks - U : Unknown networks
Charging Characteristics	Displays the Charging characteristics. Hot Billing, Flat rate Billing, Prepaid Billing and Normal Billing
Charging Characteristics Selection Mode	Displays the selection mode of the Charging characteristics.
MNRG Flag	The MNRG (Mobile Not Reachable for GPRS) flag indicates whether activity from the MS will be reported to the HLR or not. Possible values are True or False.
PPF	The PPF (Page Proceed Flag) indicates whether paging for PS and CS services can be initiated. Possible values are True or False.
NGAF	The NGAF (Non-Gprs Alert Flag) indicates whether activity from the MS will be reported to the MCSC/VLR. Possible values are True or False.
VLR-Reliable	Set to 'false' when the SGSN has received a reset indication from the VLR. The SGSN may request the MS, upon reception of the next routing area update (either periodic routing area update or combined routing and location area update) procedure, to re-attach to non-GPRS services if the MS is still IMSI attached to non-GPRS services. Alternatively, the SGSN may upon reception of a combined routing and location area update request or a periodic routing area update from a MS that is still attached for non-GPRS service, perform immediately the location update for non-GPRS services procedure.
VLR-Association	States associated to the Gs interface in the VLR. Possible states are: - Gs-NULL - LA-UPDATE PRESENT - Gs-ASSOCIATED
NRI Assigned	The Network Resource Identifier (NRI) is used either when Iu-flex or Gb-flex is used or when MOCN configuration is used for network sharing. NRI is a 1-10 bit length value that is a part of PTMSI. This de-multiplexes which SGSN handles the subscriber at the RNC or BSS. The NRI that was chosen for this subscriber is shown and this is useful to know when this SGSN is configured with more than one NRI.

Field	Description
Network Sharing Capability	Specifies the MS support for network shearing. When network sharing feature is enabled, it is possible that the MS is a supporting MS or a non-supporting MS. The three possible values the MS Network Sharing Support feature can hold are: • Not Applicable - Network Sharing is not enabled. • Not Supported - Network Sharing is enabled but the MS does not support this feature. • Supported - Network Sharing is enabled and the MS supports this feature.
Access Type	Access type that the subscriber is using. Following are some examples of access type, pdsn-simple-ip, ha-mobile-ip or ggsn-pdp-type-ipv4.
Access Tech	Access technology used by the subscriber. Following are some example s of access technology WCDMA, UTRAN, FEMTO UTRAN.
Callid	Displays subscriber's call identification number.
State	The call state. Possible states are C : connected, c : Connecting, d : Disconnecting.
Connect Time	Time of connection in Day Month d hh:mm:ss yyyy format.
Network Type	Type of network. Following are some of the examples of network type IP, Mobile IP, L2TP.
Idle Time	Time period in hh:mm:ss format, for this duration the subscriber session has been idle, either in active or in dormant state.
User Location (RAI)	Location of the user in the type of network. This is the Routing Area Identifier (RAI) provided during the registration with the GW service. The RAI signifies the routing area belonging to the GW service.
Serving PLMN	Identification of serving Public Land Mobile Network (PLMN).
Global RNC-Id	Displays information related to Global Radio Network Controller (RNC) settings used by CS core network for a GW service on a chassis . It is configured under PLMN Id.
VLR Number	Total number of VLRs associated with this application.
ISR Activated	Current total number of ISR activated UEs.
GEA/1	Total number of currently attached subscribers that are affecting MS network capability by using GPRS Encryption Alogrithm (GEA)/1 encryption.
GEA/2	Total number of currently attached subscribers that are affecting MS network capability by using GPRS Encryption Alogrithm (GEA)/2 encryption.
GEA/3	Total number of currently attached subscribers that are affecting MS network capability by using GPRS Encryption Alogrithm (GEA)/3 encryption.
GEA/4	Total number of currently attached subscribers that are affecting MS network capability by using GPRS Encryption Alogrithm (GEA)/4 encryption.
GEA/5	Total number of currently attached subscribers that are affecting MS network capability by using GPRS Encryption Alogrithm (GEA)/5 encryption.
GEA/6	Total number of currently attached subscribers that are affecting MS network capability by using GPRS Encryption Alogrithm (GEA)/6 encryption.
GEA/7	Total number of currently attached subscribers that are affecting MS network capability by using GPRS Encryption Alogrithm (GEA)/7 encryption.

Field	Description
LCS VA Capability	Specifies availability of Location Service (LCS) Value Added (VA) capability.
Split PG Cycle Code	Value of Split PG Cycle parameter, for the Discontinuous Reception (DRX).
SPLIT on CCCH	Availability of split on CCCH parameter for Discontinuous Reception (DRX).
APN	Access Point Name associated with the user name or subscriber.
NSAPI	subscriber's Network Service Access Point Identifier (NSAPI).
Context Initiated By	Session context initiator for example an MS.
Direct Tunnel	Specifies whether a direct tunnel between RAN and GGSN is established, not established or torn down by the SGSN.
Fast Path	Specifies whether the fast path is established so that SGSN can perform other signaling procedures and higher services or such fast path is not established.
Charging Characteristics	Associated charging characteristics profile for example hot or normal or pre-paid or flat billing.
Charging Characteristics Selection Mode	Selection mode of associated charging characteristics for example APN.
Charging Id	Contains a unique identifier that can be used for correlating charging records and events.
APN Selection Mode	Type of associated APN selection method. For example an APN selection mode can be chosen by SGSN, sent by MS or subscribed.
Requested and Negotiated QoS	A Quality of Service Profile (QoS) profile for the GPRS is defined using service parameters such as: • Reliability class • Delay class • Traffic class • Max sdu size • Max bit rate uplink • Max bit rate downlink • Residual bit error rate • Sdu error rate • Traffic handling priority • Transfer delay • Guaranteed bit rate uplink • Guaranteed bit rate downlink • Precedence class • Peak throughput • Mean throughput Using these parameters an MS requests the network with specific values for the QoS profile parameters and the network provides the negotiated values of the profile parameters. There can be a difference between the values of the QoS parameters requested by the Mobile Station (MS), and those negotiated with the network.

Field	Description
Reliability Class (Requested QoS)	It's a QoS attribute associated with reliability. It considers reliability attributes such as delivery order, traffic handling priority as well as allocation and retention priority.
Delay Class (Requested QoS)	It's a QoS attribute associated with traffic flow, the delay class indicates network transient as well as transfer delay.
Traffic Class (Requested QoS)	It's a QoS attribute indicating various categories of traffic. For example a traffic class can be, Conversational, Streaming, Background, Interactive 1, Interactive 2 or Interactive 3.
Max sdu Size (Requested QoS)	It's a QoS attribute that indicates maximum allowable size of Service Data Units (SDUs).
Max Bit Rate Uplink (Requested QoS)	It's a QoS attribute indicating maximum allowable rate in kbps for sending the data from an MS to network. This is a requested QoS parameter indicating the upper limits requested by the subscriber or the default values provided as per the QoS profile.
Max Bit Rate Downlink (Requested QoS)	It's a QoS attribute indicating maximum allowable rate in kbps for sending the data from the network to an MS.
Residual Bit Error Rate (Requested QoS)	It's a QoS attribute indicating reliability based on residual Bit Error Rate (BER). For specific traffic class such as conversational, streaming, interactive or background certain range of residual BER is required.
Sdu Error Rate (Requested QoS)	It's a QoS attribute indicating reliability based on Service Delivery Unit (SDU) error rate. For specific traffic class such as conversational, streaming, interactive or background certain range of Sdu Error Rate is required.
Traffic Handling Priority (Requested QoS)	It's a QoS attribute indicating the importance or priority of handling SDUs belonging to a specific PDP context as compared to any other PDP context.
Transfer Delay (Requested QoS)	It's a QoS attribute. It indicates the delay encountered in ms while delivering about 95% SDUs in the life time of a given bearer service.
Guaranteed Bit Rate Uplink (Requested QoS)	It's a QoS attribute. It's a rate that indicates the guaranteed number of bits delivered by the MS to the SGSN in a specific time frame divided by the duration.
Guaranteed Bit Rate Downlink (Requested QoS)	It's a QoS attribute. It's a rate that indicates the guaranteed number of bits delivered by the SGSN to the MS in a specific time frame, divided by the duration.
Precedence Class (Requested QoS)	It's a QoS attribute that indicates the service precedence supported by the SGSN by discarding packets based on the basis of requested and negotiated precedence between MS and UTRAN. For example a precedence class can have values such as high, normal and low.
Peak Throughput (Requested QoS)	It's a QoS attribute that indicates configured maximum allowed throughput rate. This attribute along with other attributes such as precedence, delay and reliability classes can be used for shaping traffic between SGSN and MS.
Mean Throughput (Requested QoS)	It's a QoS attribute that indicates configured mean throughput rate. This attribute along with other attributes such as precedence, delay and reliability classes can be used for shaping traffic between SGSN and MS.
Reliability Class (Negotiated QoS)	It's a QoS attribute associated with reliability. It considers reliability attributes such as delivery order, traffic handling priority as well as allocation and retention priority.
Delay Class (Negotiated QoS)	It's a QoS attribute associated with traffic flow, the delay class indicates network transient as well as transfer delay.

Field	Description
Traffic Class (Negotiated QoS)	It's a QoS attribute indicating various categories of traffic. For example a traffic class can be, Conversational, Streaming, Background, Interactive 1, Interactive 2 or Interactive 3.
Max sdu Size (Negotiated QoS)	It's a QoS attribute that indicates maximum allowable size of Service Data Units (SDUs).
Max Bit Rate Uplink (Negotiated QoS)	It's a QoS attribute indicating maximum allowable rate in kbps for sending the data from an MS to network.
Max Bit Rate Downlink (Negotiated QoS)	It's a QoS attribute indicating maximum allowable rate in kbps for sending the data from the network to an MS.
Residual Bit Error Rate (Negotiated QoS)	It's a QoS attribute indicating reliability based on residual Bit Error Rate (BER). For specific traffic class such as conversational, streaming, interactive or background certain range of residual BER is required.
Sdu Error Rate (Negotiated QoS)	It's a QoS attribute indicating reliability based on Service Delivery Unit (SDU) error rate. For specific traffic class such as conversational, streaming, interactive or background certain range of Sdu Error Rate is required.
Traffic Handling Priority (Negotiated QoS)	It's a QoS attribute indicating the importance or priority of handling SDUs belonging to a specific PDP context as compared to any other PDP context.
Transfer Delay (Negotiated QoS)	It's a QoS attribute. It indicates the delay encountered in ms while delivering about 95% SDUs in the life time of a given bearer service.
Guaranteed Bit Rate Uplink (Negotiated QoS)	It's a QoS attribute. It's a rate that indicates the guaranteed number of bits delivered by the MS to the SGSN in a specific time frame divided by the duration.
Guaranteed Bit Rate Downlink (Negotiated QoS)	It's a QoS attribute. It's a rate that indicates the guaranteed number of bits delivered by the SGSN to the MS in a specific time frame, divided by the duration.
Precedence Class (Negotiated QoS)	It's a QoS attribute that indicates the service precedence supported by the SGSN by discarding packets based on the basis of requested and negotiated precedence between MS and UTRAN. For example a precedence class can have values such as high, normal and low.
Peak Throughput (Negotiated QoS)	It's a QoS attribute that indicates configured maximum allowed throughput rate. This attribute along with other attributes such as precedence, delay and reliability classes can be used for shaping traffic between SGSN and MS.
Mean Throughput (Negotiated QoS)	It's a QoS attribute that indicates configured mean throughput rate. This attribute along with other attributes such as precedence, delay and reliability classes can be used for shaping traffic between SGSN and MS.
Downlink traffic-rate-limit	The limit or maximum allowable value for rate of traffic from UTRAN to the MS. This limit can be enabled or disabled.
Uplink traffic-rate-limit	The limit or maximum allowable value for the rate of traffic from MS to UTRAN. This limit can be enabled or disabled.
Input Packets	Number of packets received for example management packets or pass packets.
Input Bytes	Number of bytes received.
Input Packets Dropped	Number of packets that were dropped while receiving data for this subscriber session.
Input Bytes Dropped	Number of bytes dropped while receiving data for this subscriber session.

Field	Description
Input Packets Dropped due to LORC	Number of packets that were dropped while receiving that data due to Loss Of Radio Coverage (LORC).
Input Bytes Dropped due to LORC	Number of bytes that were dropped while receiving that data due to Loss Of Radio Coverage (LORC).
Out put Packets Dropped	Nnumber of packets that were dropped while transmitting data for this subscriber session. It includes packets blocked by Access Control Lists (ACLs).
Output Bytes Dropped	Number of bytes that were dropped while transmitting data for this subscriber session.
Output Packets Dropped due to LORC	Number of packets that were dropped while UE was out of coverage area or radio coverage was lost for a subscriber. This is applicable when SGSN notifies update PDP contexts for QoS change. With GTP-C extension for Loss Of Radio Coverage (LORC) and GGSN is enabled for overcharging protection for subscriber due to LORC.
Pk Rate From User (bps)	Peak or maximum data rate, in bits per second for the data that is sent by the subscriber to the network during last sampling period.
Pk Rate to User (bps)	Peak or maximum data rate, in bits per second for the data that is received by the subscriber from the network during last sampling period.
Sust Rate From User (bps)	Sustainable rate of packet transmission by the subscriber to the network, in bits per seconds.
Sust Rate to User (bps)	Sustainable speed or rate of packet reception by the subscriber from the network, in bits per seconds.
Ave Rate From User (bps)	Mean or average data rate, in bits per second for the data that is sent from the subscriber to the network for last three sampling periods.
Ave Rate to User (bps)	Mean or average data rate, in bit per second for the data that is received by the subscriber from the network for last three sampling periods.
Current PTMSI	Current value of Packet Temporary Mobile Subscriber Identifier (P – TMSI), an identifier allocated to UE by SGSN.
Current PTMSI Acked by MS	Specifies whether the current P-TMSI is acknowledged by the mobile station.
Any Previous PTMSI	Specifies presence or absence of any previous P-TMSI.
MNRG Flag	Current status of Mobile Not Reachable for GPRS (MNRG) flag. This flag indicates whether the MS activates are being reported to HLR or not. Possible values for this flag are true or false.
PDP Context Id (PDP Subscription)	Identifies the PDP context for PDP subscription data.
APN (PDP Subscription)	Identifies the Access Point Name (APN) associated with this PDP subscription.
PDP Type (PDP Subscription)	Category of PDP context. For example it can be IPv4, IPv6 or PPP.
PDP Address Type (PDP Subscription)	Category or type of PDP address allocation. For example the address type can be static or dynamic.
Ext PDP Address Type (PDP Subscription)	Category or type of address allocation for external PDP address. For example it can be static or dynamic.
Charging Characteristics (PDP Subscription)	Category of charging characteristics associated with this PDP subscription. For example it can be normal billing or hot billing.

Field	Description
VPLMN Address Allowed (PDP Subscription)	Specifies whether the address of Visited Public Land Mobile Network is allowed or not allowed.
Reliability Class (PDP Subscription)	Reliability class associated with the PDP subscription. It considers reliability attributes such as delivery order, traffic handling priority, as well as allocation and retention priority. For example reliability class for PDP subscription can be unacknowledged GTP, LLC, acknowledged RLC or protected data.
Delay Class (PDP Subscription)	Defined category of network transient delay for the PDP subscription data. For example class 4.
Precedence Class (PDP Subscription)	Service precedence delay supported by SGSN by discarding or allowing packets based on the precedence class for the PDP subscription. For example the precedence class for PDP subscription can be high priority.
Peak Throughput (PDP Subscription)	Configured maximum allowed throughput rate for the PDP subscription. Along with other fields such as reliability, delay or precedence class, it can be used for traffic shaping.
Mean Throughput (PDP Subscription)	Configured mean throughput rate for the PDP subscription. Along with other fields such as reliability, delay or precedence class, it can be used for traffic shaping.
Allocation/Retention Priority (PDP Subscription)	Allocation, retention priority indicates the reliability of the PDP subscription data. For example for various traffic classes such as conversational, streaming, interactive and background, this priority can be defined as 1 or 2 or 3.
Delivery of Erroneous SDUs (PDP Subscription)	Status of the delivery of erroneous Service Delivery Units (SDUs) for the PDP subscription. For example it indicates whether the delivery of erroneous SDU's is detected or not.
Traffic Class (PDP Subscription)	Category of traffic associated with this PDP subscription. Traffic is broadly categorized as Conversational, streaming, Background and Interactive.
Max SDU Size (PDP Subscription)	Maximum allowable size of Service Data Units (SDUs) in octets, which is associated with this PDP subscription data.
Max Bit Rate Uplink (PDP Subscription)	Maximum allowable rate in kbps for sending that data from an MS to network, that is associated with the PDP subscription. Indicates maximum allowable rate in kbps for sending that data from an MS to network, that is associated with the PDP subscription.
Max Bit Rate Downlink (PDP Subscription)	Maximum allowable rate in kbps for sending the data from network to the MS, which is associated with the PDP subscription.
Residual Bit Error Rate (PDP Subscription)	Reliability based on residual Bit Error Rate (BER) associated with PDP subscription. For specific traffic class such as conversational, streaming, interactive or background, certain range of residual BER is required.
SDU Error Rate (PDP Subscription)	Reliability class based on Service Delivery Unit (SDU) error rate associated with the PDP subscription. For specific traffic class such as Conversational, Streaming, Interactive or background, certain range of SDU error rate is required.
Traffic Handling Priority (PDP Subscription)	Priority or importance of handling SDUs belonging to a specific context associated with the PDP subscription.
Transfer Delay (PDP Subscription)	Delay encountered in ms, while delivering about 95% of SDUs associated with the PDP context, in the life time of the bearer service.
Guaranteed Bit Rate Uplink (PDP Subscription)	Guaranteed number of bits delivered by MS to network in kbps for the associated PDP context.

Field	Description
Gaurenteed Bit Rate Downlink (PDP Subscription)	Guaranteed number of bits delivered by network to MS, in kbps for the associated PDP context.

show subscribers sgsn-only partial qos negotiated

Table 437. show subscribers sgsn-only partial qos negotiated Command Output Descriptions

Field	Description
QoS	Indicates the type of action for QoS. Possible values are: - QoS Requested (Req) - QoS Negotiated (Neg)
Traffic Class	Specifies the class of traffic. Possible values are: - Conversational (Conv) - Streaming (Strm) - Background (Back) - Interactive (Intr) - Unknown (Unkn)
Value	Specifies the status of QoS and subscriber. Possible values are: - Subscribed (Subs) - Reserved (Resv) - Best Effort (Best) - Negotiated (Nego)
IMSI	Indicates the International Mobile Subscriber identity of subscriber.
NSAPI	Indicates the Network Service Access Point Identifier of the subscriber.
Peak Thruput octet/h	The peak throughput in octets per hour for this subscriber.
Mean Thruput octet/h	The mean throughput in octets per hour for this subscriber.
MAX SDU Size	The maximum size of service data unit (SDU) in KB.
MBR UP kbps	The maximum bit rate in kilobit per second allowed for this subscriber for upload.
MBR Down kbps	The maximum bit rate in kilobit per second allowed for this subscriber for download.
GBR UP kbps	The guaranteed bit rate in kilobit per second allowed for this subscriber for upload.
GBR Down kbps	The guaranteed bit rate in kilobit per second allowed for this subscriber for download.

show subscribers summary

Table 438. show subscribers summary Command Output Descriptions

Field	Description
Total Subscribers	Displays the total number of subscribers active or dormant on system. This counter also displays the packet and flow status and reasons for them: Type of subscribers and packet/flow status are: - pdsn-simple-ipv4 - pdsn-simple-ipv6 - pdsn-mobile-ip - ha-mobile-ipv6 - hsgw-ipv6 - hsgw-ipv4 - hsgw-ipv4-ipv6 - pgw-pmip-ipv6 - pgw-pmip-ipv4 - pgw-pmip-ipv4-ipv6 - pgw-gtp-ipv6 - pgw-gtp-ipv4 - pgw-gtp-ipv4-ipv6 - sgw-gtp-ipv6 - sgw-gtp-ipv4 - sgw-gtp-ipv4-ipv6 - sgw-pmip-ipv6 - sgw-pmip-ipv4 - sgw-pmip-ipv4-ipv6 - mme - ipsg-rad-snoop - ipsg-rad-server - ha-mobile-ip

Field	Description
Total Subscribers (<i>cont.</i>)	- ggsn-pdp-type-ppp - ggsn-pdp-type-ipv4 - lns-l2tp - ggsn-pdp-type-ipv6 - ggsn-mbms-ue-type-ipv4 - pdif-simple-ipv4 - pdif-simple-ipv6 - pdif-mobile-ip - pdg-direct-ip - pdg-ttg - femto-ip - epdg-pmip-ipv6 - epdg-pmip-ipv4 - epdg-pmip-ipv4-ipv6 - sgsn - sgsn-pdp-type-ppp - sgsn-pdp-type-ipv4 - sgsn-pdp-type-ipv6 - sgsn-pdp-type-ipv4-ipv6 - type not determined - sgsn-subs-type-g - nsgsn-subs-type-s4 - sgsn-pdp-type-g - nsgsn-pdp-type-s4 - asngw-simple-ipv4 - asngw-simple-ipv6 - asngw-mobile-ip - asngw-non-anchor - asngw-auth-only - phsgw-simple-ipv4 - phsgw-simple-ipv6

Field	Description
Total Subscribers (cont.)	- phsgw-mobile-ip - phsgw-non-anchor - cdma 1x rtt sessions - cdma evdo sessions - cdma evdo rev-a sessions - cdma 1x rtt active - cdma evdo active - cdma evdo rev-a active - asnpc-idle-mode - phspc-sleep-mode - hnbgw - hnbgw-iu - bng - pcc - in bytes dropped - out bytes dropped - in packet dropped - out packet dropped - in packet dropped zero mbr - out packet dropped zero mbr - ipv4 ttl exceeded - ipv4 bad hdr - ipv4 bad length trim - ipv4 frag failure - ipv4 frag sent - ipv4 in-acl dropped - ipv4 out-acl dropped - ipv4 in-mcast pkt dropped - ipv4 in-bcast pkt dropped - ipv6 bad hdr - ipv6 bad length trim
Total Subscribers (cont.)	- ipv6 in-acl dropped - ipv6 out-acl dropped - ipv4 in-css-down dropped - ipv4 out-css-down dropped - ipv4 out xoff pkt dropped - ipv6 out xoff pkt dropped - ipv4 xoff bytes dropped - ipv6 xoff bytes dropped - ipv4 out no-flow dropped - ipv4 early pdu rcvd - ipv4 icmp packets dropped - ipv6 input ehrpd-access drop - ipv6 output ehrpd-access drop - dormancy count - handoff count - pdsn fwd dynamic flows - pdsn rev dynamic flows - fwd static access-flows - rev static access-flows - pdsn fwd packet filters - pdsn rev packet filters - traffic flow templates

Field	Description
Active	Displays the total number all type of Active subscribers on the chassis.
Dormant	Displays the total number all type of Dormant subscribers on the chassis.

show subscribers tft

Table 439. show subscribers tft Command Output Descriptions

Field	Description
Username	Specifies the name of the subscriber.
callid	Displays the subscriber's call identification number (callid).
msid	Displays the subscriber's mobile station identification (MSID).
Number of TFTs	Displays the number of Traffic Flow Templates (TFTs).
MS IP Address	Displays the MS IP address.
Number of Packet Filters	Displays the number of Packet Filters.
Filter Evaluation Precedence 1:	
Flow Id	Displays the flow ID for the first precedence.
Flow Direction	Displays the flow direction (FORWARD or REVERSE) for the first precedence.
Flow State	Displays the flow state and A10 mapping for the first precedence.
Packet Filter Type	Displays the type of Packet Filter for the first precedence.
Filter Components Follows	
Ipv4 Source Addr/Mask	Displays the IP address and mask for the Ipv4 source address.
Filter Evaluation Precedence 2:	
Flow Id	Displays the flow ID for the second precedence.
Flow Direction	Displays the flow direction (FORWARD or REVERSE) for the second precedence.
Flow State	Displays the flow state and A10 mapping for the second precedence.
Packet Filter Type	Displays the type of Packet Filter for the second precedence.
Filter Components Follows	
Ipv4 Source Addr/Mask	Displays the IP address and mask for the Ipv4 source address.
Total TFTs matching specified criteria:	Displays the total number of matching TFTs.

show subscribers wf1 all

Table 440.show subscribers wf1 all Command Output Descriptions

Field	Description
vvvvv	Displays service and session state information. This column provides a code consisting of three characters. From left-to-right, the first character represents the Access Type that the subscriber is using. The possible access types are: - S: pdsn-simple-ip - M: pdsn-mobile-ip - H: ha-mobile-ip - P: ggsn-pdp-type-ppp - h: ha-ipsec - N: lns-l2tp - I: ggsn-pdp-type-ipv4 - A: asngw-simple-ip - G: IPSEG - V: ggsn-pdp-type-ipv6 - B: asngw-mobile-ip - C: cscf-sip - R: sgw-gtp-ipv4 - O: sgw-gtp-ipv6 - Q: sgw-gtp-ipv4-ipv6 - W: pgw-gtp-ipv4 - Y: pgw-gtp-ipv6 - Z: pgw-gtp-ipv4-ipv6 - s: sgsn - p: sgsn-pdp-type-ppp - 4: sgsn-pdp-type-ip - 6: sgsn-pdp-type-ipv6 - L: pdif-simple-ip

Field	Description
vvvvv (<i>cont.</i>)	- K: pdif-mobile-ip - x: S1-MME - F: standalone-fa - J: asngw-non-anchor - e: ggsn-mbms-ue - i: asnpc - E: ha-mobile-ipv6 - X: HSGW - u: Unknown From left-to-right, the second character represents the Access Technology. The possible call states are: - X: CDMA 1xRTT - E: GPRS GERAN - I: IP - D: CDMA EV-DO - U: WCDMA UTRAN - W: Wireless LAN - A: CDMA EV-DO RevA - G: GPRS Other - M: WiMAX - C: CDMA Other - N: GAN (Generic Access Network) - H: HSPA (High Speed Packet Access) - P: PDIF - .: Other/Unknown From left-to-right, the third character represents the Call State. The possible call states are: - C: Connected - r: CSCF-Registering - c: Connecting - d: Disconnecting - R: CSCF-Registered - u: Unknown

Field	Description
vvvvv(continued)	From left-to-right, the fourth character represents the Link Status of the session. The possible idle states are: - A: Online/Active (airlink connected) - D: Dormant (airlink not connected) From left-to-right, the fifth character represents the session Network Type. The possible network types are: - I: IP - M: Mobile-IP - L: L2TP - P: Proxy-Mobile-IP - i: IP-in-IP - G: GRE - V: IPv6-in-IPv4 - S: IPSEC - A: R4 (IP-GRE) - u: Unknown From left-to-right, the sixth character represents the Access CSCF Status of the session. The possible network types are: - A: Attached - C: Call (Unknown Type) - N: Not Attached - v: Voice Call - .: Not Applicable - V: Video Call
CALLID	Displays the subscriber's call identification (callid) number.
MSID	Displays the subscriber's mobile station identification (MSID) number.
USERNAME	Displays the subscriber's username.
IP	Displays the IP address assigned to the subscriber.
TIME-IDLE	Displays the amount of time that the subscriber session has been idle either in an active or dormant state.
Access Peer Address	The peer that accessed the system to initiate the subscriber session. This is an IP v4 address and a designator to identify the type of peer. The designator may be one of: - BS: ASN Base Station - ASNGW: Access Service Network Gateway - PCF: Packet Control Function - FA: Mobile IP Foreign Agent - SGSN: Serving GPRS Support Node - LAC: L2TP Access Concentrator
Service Address	The service that is processing the subscriber session. This is listed as an IP v4 address and a designator to identify the type of service. The designator may be one of: - ASNGW: Access Service Network Gateway - PDSN: Packet Data Serving Node - HA: Mobile IP Home Agent - GGSN: Gateway GPRS Support Node - LNS: L2TP Network Server

Field	Description
Network Peer Address	The network peer that the subscriber session connect to. This is listed as an IP v4 address and a designator to identify the type of network peer. The designator may be one of: - HA: Mobile IP Home Agent - LNS: L2TP Network Server - IPinIP: IP-in-IP Tunnel Peer - GRE: Generic Routing Encapsulation Peer - 6in4: IP V6 packets encapsulated in an IP v4 tunnel peer
Connect Time	The date and time that the subscriber session was connected.

Chapter 158

show tacacs

This chapter provides `show tacacs` command output tables.

show tacacs

Table 441. `show tacacs` Command Output Descriptions

Field	Description
active session # <i>n</i>	Numerical identifier of an active TACACS+ session.
login username	The username of the TACACS+ user.
login tty	The physical or logical port identifier for a user login.
time of login	The date and time of the TACACS+ login.
login server priority	The specified priority of the TACACS+ server used for login.
current login status	The current login status for this user (pass/fail).
current session state	The current operational state of the TACACS+ session.
current privilege level	The CLI privilege level assigned to the user: • 0: Inspector (CLI only) • 1: Inspector (CLI and ECSEMS only) • 2: Inspector (FTP only) • 3: Inspector (CLI and FTP only) • 4: Inspector (CLI, FTP, and ECSEMS only) • 5: Operator (CLI only) • 6: Operator (CLI and ECSEMS only) • 7: Operator (FTP only) • 8: Operator (CLI and FTP only) • 9: Operator (CLI, FTP and ECSEMS only) • 10: Administrator (CLI only) • 11: Administrator (CLI and ECSEMS only) • 12: Administrator (FTP only) • 13: Administrator (CLI, FTP and Lawful Intercept only) • 14: Administrator (CLI, FTP and ECSEMS only) • 15: Administrator (CLI, FTP, ECSEMS and Lawful Intercept)

Field	Description
remote client application	The application type used by the remote client to access the ASR 5000, if known: • telnet • ssh • ftp • console • unknown
remote client ip address	The IP address of the remote client. If the remote client IP address cannot be determined or is unknown, this field will contain all zeros or be blank. For example, logins via the ASR 5000's console port typically are not assigned an IP address.
last server reply status	The last known server error code returned for this user session.
Total TACACS+ sessions	The total number of TACACS+ sessions that are currently active.

show tacacs client statistics

Table 442. show tacacs client statistics Command Output Descriptions

Field	Description
last login failure time	The timestamp of the most recent failed TACACS+ authentication attempt.
successful connections	The total number of successful TACACS+ connections established with the TACACS+ server.
failed connections	The total number of connection attempts with a TACACS+ server that have failed.
authentication PASS	The total number of connections established with a TACACS+ server that have passed authentication.
authentication FAIL	The total number of authentication connections attempts with a TACACS+ server that have failed.
session starts	The total number of TACACS+ session starts. A session start is defined as the point at which the TACACS+ user has passed authentication.
active sessions	The total number of active TACACS+ sessions.
authorization errors	The total number of TACACS+ authorization errors.
accounting errors	The total number of TACACS+ accounting errors.
non-TACACS+ logins	The total number of non-TACACS+ logins. Note that the system can be configured to allow TACACS+ users to continue on to use non-TACACS+ authentication services if the user fails the TACACS+ login.

show tacacs session statistics

Table 443. show tacacs session statistics Command Output Descriptions

Field	Description
active session # <i>n</i>	A numerical identifier assigned to an active TACACS+ CLI session.
task id	The software task ID assigned by the client to identify TACACS+ accounting statistics.
task instance	The software task instance ID assigned by the ASR 5000 for each active TACACS+ session.
login username	The username assigned to this TACACS+ session.
login tty	The logical or physical port identifier assigned for a TACACS+ login.
tty connect time	The time at which the TACACS+ connection was established.
session start time	The time and date of the TACACS+ session start time, which is defined as the time at which a TACACS+ user passes TACACS+ authentication.
pre-bytes in	The total number of bytes received from the TACACS+ server before the TACACS+ user was authenticated.
pre-bytes out	The total number of bytes sent to the TACACS+ server before the TACACS+ user was authenticated.
pre-packets in	The total number of packets received from the TACACS+ server before the TACACS+ user was authenticated.
pre-packets out	The total number of packets sent to the TACACS+ server before the TACACS+ user was authenticated.
bytes in	The total number of bytes (pre- and post-authentication) received from the TACACS+ server after the TACACS+ user was authenticated.
bytes out	The total number of bytes sent (pre- and post-authentication) to the TACACS+ server after the TACACS+ user was authenticated.
packets in	The total number of packets (pre- and post-authentication) received from the TACACS+ server for this TACACS+ session.
packets out	The total number of packets (pre- and post-authentication) sent to the TACACS+ server after the TACACS+ user was authenticated.
authen start requests success	The total number of authentication start requests sent to the TACACS+ server that were successful.
authen start requests error	The total number of authentication start requests sent to the TACACS+ server that were unsuccessful, typically due to a protocol error.
authen cont requests success	The total number of authentication continue requests sent to the TACACS+ server that were successful.
authen cont requests error	The total number of authentication continue (username and/or password) requests sent to the TACACS+ server that were failed, typically due to a protocol error.
authen start/cont rep success	The number of authentication start/continue Reply messages received from the TACACS+ server that were successful.

Field	Description
authen start/cont rep failure	The number of authentication start/continue Reply messages received from the TACACS+ server that failed.
authen start/cont rep timeout	The number of authentication start/continue Reply messages received from the TACACS+ server that timed out.
author requests success	The number of TACACS+ authorization requests sent to the TACACS+ server that were successful.
author requests failure	The number of TACACS+ authorization requests sent to the TACACS+ server that failed.
author responses success	The number of authorization responses received from the TACACS+ server that were successful.
author responses failure	The number of authorization responses received from the TACACS+ server that failed.
author responses timeout	The number of authorization responses from the TACACS+ server that timed out.
account requests success	The number of accounting requests sent to the TACACS+ server that were successful.
account requests error	The number of accounting requests sent to the TACACS+ server that were unsuccessful, typically due to a protocol error.
account replies success	The number of accounting replies from the TACACS+ server that were successful.
account replies failure	The number of accounting replies from the TACACS+ server that failed.
account replies timeout	The number of accounting replies from the TACACS+ server that timed out.
total active TACACS+ sessions	The total number of currently active TACACS+ sessions.

Chapter 159

show task

This chapter describes the outputs of the **show task** command.

show task info

This command displays current information about tasks running on the system.

Table 444. show task info Command Output Descriptions

Field	Description
Task <facility> instance <id>	Identifies the task by its facility name and the instance identifier for which statistics are displayed.
Process <process>	Identifies the process for which statistics are displayed.
Location	The card number, CPU number and process identifier (Pid) for which statistics are displayed.
Parent	The parent task and instance identifier, as well the location where the parent task is running.
CPU usage	The percentage of CPU time actually used versus allocated (allc), as well as the maximum used.
File usage	The number of files actually used versus allocated, as well as the maximum used.
Memory usage	The amount of memory actually used versus allocated, as well as the maximum used. (release 12.x)

show task resources card

This command displays current statistics per card.

Table 445. show task resources card Command Output Descriptions

Field	Description
cpu	The CPU on the specified card where the task is running (identified by slot_number/CPU_number).
facility	The facility for which statistics are displayed.
task inst	The task instance identifier.
cputime	The percentage of CPU time actually used versus the allocated time (allc).
memory	The amount of memory actually used versus allocated.
files	The number of files actually used versus allocated.
sessions	The number of sessions used versus allocated, as well as the status of those sessions.
Total	Summary for all task instances, CPU time, memory, files and sessions.

show task resources facility

This command displays current statistics for the specified facility.

Table 446. show task resources facility Command Output Descriptions

Field	Description
cpu	The CPU on the card where the facility is running (identified by slot_number/CPU_number).
facility	The facility for which statistics are displayed.
task inst	The task instance identifier.
cputime	The percentage of CPU time actually used versus the allocated time (allc).
memory	The amount of memory actually used versus allocated.
files	The number of files actually used versus allocated.
sessions	The number of sessions used versus allocated, as well as the status of those sessions.
Total	Summary for all task instances, CPU time, memory, files and sessions.

show task resources max

This command displays maximum (instead of current) statistics for all facilities.

Table 447. show task resources max Command Output Descriptions

Field	Description
cpu	The CPU on the specified card where the facility is running (identified by slot_number/CPU_number).
facility	The facility for which maximum statistics are displayed.
task inst	The task instance identifier.
cputime	The maximum percentage of CPU time actually used versus the allocated time (allc).
memory	The maximum amount of memory actually used versus allocated.
files	The maximum number of files actually used versus allocated.
sessions	The maximum number of sessions used versus allocated, as well as the status of those sessions.
Total	Summary of maximum statistics for all task instances, CPU time, memory, files and sessions.

show task table

This command displays current statistics for all child and parent facilities running on all cards in the system.

Table 448. show task table Command Output Descriptions

Field	Description
Currently Running Tasks	
cpu	The CPU on the specified card where the facility is running (identified by slot_number/CPU_number).
task facility	The task/facility for which statistics are displayed.
inst	The task instance identifier.
pid	The process identifier.
pri	The priority of the instance.
Parent Tasks	
parent facility	The parent facility of the task for which statistics are displayed.
inst	The instance identifier of the parent facility.
pid	The process identifier of the parent facility.

Chapter 160

show temperature

The **show temperature** command displays the current temperatures for installed cards, as well as the lower and upper fan trays.

Table 449. **show temperature** Command Output Descriptions

Field	Description
Card	Indicates the slot number location of an installed card.
xx C	Displays the current temperature in Celsius detected by a sensors on the card or fan unit. The maximum temperature limit at which the card is shut down appears in parentheses immediately after the current temperature. Temperature readings will vary by card based on the location of the card within the chassis and the turbulence associated with moving air around, over and through devices on the cards. There are temperature sensors associated with major power consuming devices on each card. When any device on any card exceeds a pre-set temperature limit, the fan speed is increased on both fan trays. When all sensors on all cards are below the threshold, fan speed is proportionally reduced. When the absolute limit is reached for a device on a card, the card is shut down. To display detailed information on device-level temperature sensors, run show temp verbose.
Fan Upper	Indicates the temperature in Celsius of the air being exhausted from the chassis. The maximum operating temperature should not exceed +55 degrees C.
Fan Lower	Indicates the temperature in Celsius of the air being pulled into the chassis. The maximum ambient temperature should not exceed +40 degrees C. A temperature reading above +30 degrees C typically indicates that the environmental control system at the installation site may not be capable of handling the heat load of the chassis.

Chapter 161

show threshold

Table 450. **show threshold** Command Output Descriptions

Field	Description
Threshold operation model	The configured thresholding model.
Configured thresholds	Lists thresholds that were configured by the user (i.e. those that are not enabled as part of the system's default configuration). For each threshold listed, the scope, polling interval, and threshold values are displayed.
Active thresholds	Lists thresholds that are currently being monitored. Note that configured thresholds must be enabled using the threshold monitoring command before they're considered active. For each threshold listed, the scope, polling interval, and threshold values are displayed.
Enabled threshold groups: (name, scope)	Displays configured threshold groups and their scope (what the threshold is applied to (i.e. specific ports, IP pool groups, or system wide).
Non-default poll intervals	Displays all polling intervals whose user-configured values differ from the default values. NOTE: All threshold default values can be viewed using the show thresholds default command.
No outstanding alarm / Outstanding Alarms	Displays whether there are any outstanding (alarms for which no clear alarm was received) alarms or not. If outstanding alarms exist, they will be listed in this field.

Chapter 162

show url-blacklisting

This chapter includes the `show url-blacklisting` command output tables.

show url-blacklisting database all

Table 451. show url-blacklisting database all Command Output Descriptions

Field	Description
URL Blacklisting Static Rating Databases:	
Last Upgrade Status	Indicates status of the last database upgrade.
Path	Indicates the database path, and the status—ACTIVE/NOT LOADED.
Database Status	Indicates status of the database.
Number of URLs in DB	The total number of URLs present in the database.
Type	Indicates the database type.
Version	Indicates the database version.
Creation Time	Indicates the database creation time.
Comment	Indicates additional information.
Last Access Time	Indicates the last access timestamp.
Last Modification Time	Indicates the last modification timestamp.
Last Status Change Time	Indicates the last status change timestamp.

show url-blacklisting database facility acsmgr instance

Table 452. show url-blacklisting database facility acsmgr instance Command Output Descriptions

Field	Description
URL-Blacklisting ACSMgr Instance Based Database Configuration:	
ACSMgr Instance	The ACSMgr instance number.
BL DB Load Status	The Blacklisting database's load status.
BL DB Version	The Blacklisting database's version number.
Number of URLs	The total number of URLs present in the Blacklisting database.
Checksum	Indicates checksum details. The Blacklisting database has only one page, so the checksum is of the only page present in the database.

show url-blacklisting url

Table 453. show url-blacklisting url Command Output Descriptions

Field	Description
URL	Indicates the URL.
URL Hash	Indicates the URL hash.
URL Category	Indicates the URL category.
Haspath	Indicates the haspath status.